OhioEPA
State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

CERTIFIED MAIL

May 31, 1991

FACILITY: Ashland Chemical (Dublin)
LETTER OF WARNING
OHIO ID: 01-25-0118
USEPA ID: OHD 042 311 209

Mr. Jeffrey Kirk
Environmental Engineer
Ashland Chemical Incorporated
P.O. Box 2219
Columbus, Ohio 43216

Dear Mr. Kirk:

On May 15, 1990, the Ohio EPA transmitted to you a Notice of Deficiency (NOD) letter pursuant to a completeness review of the Ashland Chemical Dublin Part B permit application. A response to the comments of this NOD was due on or about July 2, 1990. In a letter dated June 26, 1990, you requested an extension of the due date to July 31, 1990. In the same letter you asked Ohio EPA to again address the issue of treatment in 90 days or less accumulation units as it directly affects Ashland Chemical Dublin's RCRA permitting status. For the reasons given in item #3 of your letter, you stated why you disagreed with the Ohio EPA's interpretation of the rule as presented to you in a meeting held September 6, 1989. Due to any confusion generated by Ohio EPA's position on the treatment issue, Ashland Chemical Dublin was both granted a generous extension to September 5, 1990 and the treatment issue, as it applied to your facility, was specifically addressed in a letter from Mr. Ed Lim, RCRA Engineering Section Manager, dated August 6, 1990.

Once again in a letter dated August 13, 1990, you stated your disagreement with Ohio EPA's interpretation of the rule using the same reasons and language previously presented in your letter of June 26, 1990, which Mr. Lim responded to on August 6, 1990. I personally addressed your August 13, 1990 inquiry through a statement and defense of Ohio EPA's position on the issue of regulating treatment of hazardous waste which occurs in accumulation tanks.

As of May 29, 1991, Ohio EPA has received no response either to the NOD dated May 15, 1990, or those concerns presented by Mr. Lim in the August 6, 1990 correspondence. Due to Ashland Chemical Dublin's outstanding failure to respond, the Ohio EPA must provide notice and warning that failure to correct

The Ohio EPA also requests that the facility contact Chris Hartford of the Central District Office at (614) 771-7505 within ten days of receipt of this letter to make your intentions in pursuing a Part B permit for this facility known, and to discuss each of the NOD comments in order to make clear the information being requested and the level of detail expected. This can best be accomplished through a conference call or meeting.

Sincerely,

David A. Shobe

for Linda Welch, Chief
Division of Solid and Hazardous Waste Management

cc: Lisa Pierard, U.S. EPA
Joel Morbito, U.S. EPA
Ed Lim, CO, DSHWM, Ohio EPA
Tehmton Toorkey, CO, DSHWM, Ohio EPA
Frank Basting, CO, DSHWM, Ohio EPA
Pam Allen, CO, DSHWM, Ohio EPA
Chris Hartford, CDO, DSHWM, Ohio EPA
Central File

OhioEPA
State of Ohio Environmental Protection Agency
.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
614) 644-3020 Fax (614) 644-2329

Kaz

Richard F. Celeste
Governor

CERTIFIED MAIL

RE: Ashland Chemical Co. (Dublin)
Re # OHD 042 311 209
OHIO 01-25-0118

May 15, 1990

Andrew Kolarsky
Ashland Chemical, Inc.
P.O. Box 2219
Columbus, Ohio 43216

Dear Mr. Kolarsky:

Thank you for submitting Part B of the Resource Conservation and Recovery Act (RCRA) permit application for your facility.

As you may know, Ohio has been delegated authorization to operate its hazardous waste management program in lieu of the Federal hazardous waste program. Ohio now has the responsibility for issuing Resource Conservation and Rcovery Act (RCRA) permits for hazardous waste treatment, storage and disposal facilities subject to the authority retained by U.S. EPA under the Hazardous and Solid Waste Amendment of 1984 (HSWA) to RCRA. Since the requirements and prohibitions imposed by HSWA are effective immediately regardless of a State's authorization status, USEPA will continue to implement the applicable HSWA requirements. In other words under HSWA, there will continue to be a dual State/Federal regulatory program in Ohio. To the extent Ohio's authorized program is unaffected by HSWA, the Ohio program will operate in lieu of the Federal program. To the extent HSWA-related requirements are in effect, USEPA will continue to administer and enforce those portions of HSWA in Ohio (which may include the issuance of full or partial permits) until Ohio receives authorization to do so and until that time, Ohio will continue to assist USEPA's implementation of the HSWA requirements under a cooperative agreement.

The Ohio EPA Division of Solid and Hazardous Waste Management has conducted a "completeness" review of your Part B application and has determined it to be incomplete. This application has been reviewed pursuant to the rules published in the Hazardous Waste Facility Standards Chapter in the Ohio Administrative Code.

We have enclosed comments that are the result of this review. Please provide detailed information addressing all areas indicated on the comment sheets to

267-23

Ohio EPA within 45 days of the date of receipt of this correspondence. This submission shall be in accordance with the following editorial protocol or convention:

1. Old language is over-struck.

2. New language is capitalized

3. Page headers should indicate date of submission.

4. If significant changes are necessary, pages should be re-numbered, table of contents revised, and complete sections provided as required.

Please send one copy each to:

Tom Crepeau,
Ohio EPA, DSHWM
1800 WaterMark Drive
P.O. Box 1049
Columbus, Ohio 43266-0149

Chris Hartford,
Ohio EPA, DSHWM, CDO
2305 Westbrooke Drive
P.O. Box 2198
Columbus, Ohio 43266-2198

Lisa Pierard,
RCRA Activities
Part B Application
U.S. EPA - Region V
230 South Dearborn Street
Chicago, Illinois 60690-3587

Upon receipt of a satisfactory response regarding all the information requested, Ohio EPA will notify you in writing that the application is complete. Our determination of completeness will mean that all items required by regulation appear to have been addressed in your application, but does not mean that these items have been addressed substantively or in adequate detail which would allow a determination to be made as to whether the proposal complies with the Director's Hazardous Waste Facility Standards Chapters. We may request additional information from you, if it is necessary to clarify, modify or supplement previous submissions of information in order to substantively evaluate the permit application for technical adequacy.

Failure to submit a complete permit application or to correct deficiencies in the application may result in the following: 1) revocation of your existing Ohio Hazardous Waste Facility Installation and Operation Permit, 2) denial of the application for a renewal permit, 3) referral of the matter to the Ohio Attorney General's Office for appropriate enforcement action.

If you have any questions concerning the review of the permit application, or the level of detail we expect, please do not hesitate to contact Chris Hartford at (614) 771-7505. We also recommend that the Facility contact the above referenced person, and discuss each of the enclosed comments in order to make clear the information being requested. This can be accomplished by a conference call or meeting.

Finally, as you may know, Ohio's hazardous waste law was recently amended to authorize the Attorney General to conduct background investigations on permittees and applicants for permits for hazardous waste treatment, storage and disposal facilities. Every applicant must file a disclosure statement with both the Ohio EPA and the Attorney General on a form developed by the Attorney General, at the same time that the applicant files his hazardous waste permit application with the Ohio EPA (ORC 3734.42(A)). The disclosure statement and the investigative report provided by the Attorney General will, form a basis along with the complete and technically adequate permit application for the State's determination on the permit renewal. If there are questions concerning the disclosure statement please contact Paula Cotter, of the OAG at (614) 466-2766.

Yours truly,

Edwin Y. Lim, Manager
Engineering Section
Division of Solid and Hazardous Waste Management

EYL/SKN/pas

cc: Lisa Pierard, USEPA
Joel Morbito, USEPA
Robert Babik, CO, DSHWM, Ohio EPA
Susan K. Nitecki, CO, DSHWM, Ohio EPA
Chris Hartford, CDO, DSHWM, Ohio EPA
Central File

1999U

COMMMENTS ON ASHLAND R & D

A. PART A APPLICATION

1. Section A Part A Application [OAC 3745-50-41, 3745-50-43/40 CFR 270.10, 270.13]:

The Part A application must be revised to address treatment of hazardous waste in Tanks 8 & 9 and the mixing unit in the South Bay Area.

B. FACILITY DESCRIPTION

2. B-2A Topographic Map [OAC 3745-50-44(A)(19)/40 CFR 270.14(b)(19)]:

A topographic map meeting the requirements of this rule must be provided. No topographic map(s) and no appendix was found in the application.

3. B-3b thru B-3b(3) Floodplain Standard [OAC 3745-50-44(A)(11), 3745-54-18(B)/40 CFR 270.14(b)(11), 264.18(b)]:

The most current Flood Insurance Rate Map or a copy of the map must be provided. All other applicable sections i.e. flood plan etc., must be addressed in the application.

C. WASTE CHARACTERISTICS

4. C-1, C-1B WASTE ANALYSIS [OAC 3745-50-44(A)(2), 3745-54-13(A), 3745-55-91(B)(2), 3745-55-92(A)(2)/40 CFR 270.14(b)(2), 264.13(a), 264.191(b)(2), 264.192(a)(2)]:

Ashland must include laboratory results detailing the chemical and physical analyses of representative samples of each of the four (4) waste types necessary to store and, if applicable, treat the wastes. These sections must also address waste analysis regarding Tanks 8 & 9 and the mixing unit in the South Bay Area.

5. C-2e Off-Site Wastes [OAC 3745-54-13(C)/40 CFR 264.13(c)]:

Ashland must address how wastes generated off-site will be managed, if applicable, in compliance with OAC 3745-54-13(C).

6. C-2f Ignitable, Reactive and Incompatible Wastes [OAC 3745-54-13(B)(6), 3745-54-17/40 CFR 264.13(b)(6), 264.17]:

Ashland must address waste analysis requirements for ignitable, reactive and incompatible wastes.

7. C-3a thru C-3d(4) Waste Analysis Pertaining to Land Disposal Restrictions [40 CFR 264.13, 268]:

   Ashland must address applicable land disposal restrictions requirements.

D. PROCESS INFORMATION

8. D-1a(3) Secondary Containment for Containers [OAC 3745-50-44(C)(1)(a)(i), (c) & (d), OAC 3745-55-75(A) & (D)/40 CFR 270.15(a)(1), (c) & (d), 264.175 (a) & (d)]:

   Neither the drawing nor an appendix showing the secondary containment system design was found in the application. These must be included.

9. D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids [OAC 3745-50-44(C)(1)(a), 3745-55-75(B)(11)/40 CFR 270.15(a), 264.175(b)(1)]:

   Ashland must include a statement that the base is free of cracks and gaps and will be maintained as such, a demonstration of the imperviousness of the base to wastes and precipitation, an engineering evaluation of the structural integrity of the base and a discussion of the compatibility of the base with wastes.

10. D-2 thru D-2g Tank Systems [OAC 3745-50-44(C)(2), 3745-55-90 thru 94/40 CFR 270.16, 264.190 thru 194]:

    Ashland must address applicable tank system requirements for Tanks Nos. 8 & 9 used to treat hazardous waste. If the mixing unit in the South Bay Area meets the definition of a container all rules applicable to container storage areas must be addressed as well as other applicable regulations. If it meets the definition of a tank these rules must be addressed. All reference to the underground tank should be omitted since this unit has been closed.

F. PROCEDURES TO PREVENT HAZARDS

11. F-1 THRU F-1B(2) SECURITY [OAC 3745-50-44(A)(4), 3745-54-14/40 CFR 270.14(b)(4), 264.14]:

    Ashland must address applicable requirements regarding security procedures and equipment for all units.

12. F-2a General Inspection Requirements [OAC 3745-54-33, 3745-54-15(C) & (D)/40 CFR 264.33, 264.15(c) & (d)]:

    Ashland must address compliance with the above mentioned rules which concern the testing and maintenance of equipment, remedial action and recordkeeping.

13. F-2b(2) thru F-2b(f) Tank System Inspection [OAC 3745-55-95/40 CFR 264.195]:

    Ashland must address tank system inspection requirements for Tanks 8 and 9 and the mixing unit, if applicable. Reference to the underground tank should be omitted.

14. F-4a thru F-4d Preventive Procedures, Structures and Equipment [OAC 3745-50-44(A)(8)/40 CFR 270.14(b)(8):

    Ashland must address procedures, structures and equipment to prevent hazards with respect to Tanks 8 and 9 and the mixing unit, where applicable.

15. F-5a & b Ignitable, Reactive and Incompatible Wastes [OAC 3745-50-44(A)(9), 3745-54-17/40 CFR 270.14(b)(9), 264.17]:

    Ashland must address general requirements regarding ignitable, reactive and incompatible wastes for Tanks 8 and 9 and the mixing unit.

16. F-5e & f Ignitable, Reactive and Incompatible Wastes in Tank Systems [OAC 3745-50-44(C)(2)(j), 3745-55-98, 3745-55-99(B)/40 CFR 270.16(j), 264.198, 264.199(b)]:

    Ashland must address specific requirements regarding ignitable, reactive and incompatible wastes for Tanks 8 and 9 and the mixing unit, if applicable.

G. CONTINGENCY PLAN

17. G-4h Post-Emergency Equipment Maintenance [OAC 3745-54-56(H)(2)/40 CFR 264.56(h)(2)]:

    Ashland must address requirments concerning post-emergency equipment maintenance.

I. CLOSURE AND POST-CLOSURE REQUIREMENTS

18. I-1a thru I-1c(2) Closure Requirements [OAC 3745-50-44(A)(13), 3745-55-11, 3745-55-12, 3745-55-14/40 CFR 270.14(b)(13), 264.111, 264.112, 264.114]:

Ashland must address closure requirements with respect to Tanks 8 and 9 and the mixing unit.

19. I-1f Schedule for Closure [OAC 3745-55-12(B)(6)/40 CFR 264.112(b)(6)]:

A schedule for closure must be provided for Tanks 8 and 9 and the mixing unit.

20. I-4 Cost Estimate for Closure [OAC 3745-50-44(A)(15), 3745-55-42/40 CFR 270.14(b)(15), 264.142]:

The cost estimate for closure must be revised to address Tanks 8 and 9 and the mixing unit.

J. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

21. J-1 thru J-2b Corrective Action [40 CFR 264.101]:

Ashland must address applicable corrective action requirements.

22. The application should be revised to match the latest Part B review checklist (Revision 7, 8/89). All reference to the underground storage tank must be omitted since this unit has been closed. Tanks 8 and 9 and the mixing unit in the South Bay Area must be addressed in all applicable sections.

23. Ashland currently has a water supply well which is located on the hazardous waste storage pad. In order for CDO to recommend approval of the application either the well or the storage pad must be relocated. Reasons for this are as follows:

- Due to the location of the well inside the storage area the potential risk of contaminating the well and/or aquifer is too great to be protective of human health and the environment.

- Requirements associated with the proposed Ohio Safe Drinking Water Bill will not allow a water supply system serving over 500 people to be located in the immediate vicinity of a potential source of contamination.

- For a non-transient ground water supply well that delivers 200,000 gpd or more to meet current siting criteria it must be located at least 300 feet from potential sources of contamination.

ASHLALND
CHRIS

Bill Munn

UHD.042.311.289

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION • P.O. BOX 158, WEST CARROLLTON, OHIO 45449 • (513) 298-5256

January 19, 1989

Re: Hazardous Waste Emergency Coordinator List

Please be advised that there has been a change in the Hazardous Waste Emergency Coordinator List and also in Emergency Contact Organization and/or Agency at the Ashland Chemical Company, Dayton, Ohio location.

A copy of our changes are attached for your posting. Thank you for your cooperation in the past with Ashland Chemical Company.

Sincerely,

ASHLAND CHEMICAL COMPANY

Rosemary Weaver

Rosemary Weaver
Office Manager

cc: Chief Sigler, Fire Dept.
Glenn Carmichael, Police Dept.
Robert Bowden, RCRA Activities
Dr. Shaw, Workplace Health

EMERGENCY COORDINATOR

DAYTON, OHIO

The primary emergency coordinator of the plant is the District Manager. However, in his absence both the Plant Manager and Office Manager will act as emergency coordinators.

In the absence of the above listed individuals, all plant and office personnel are familiar with the Contingency Plan and the Emergency Procedures and are authorized to act as emergency coordinators.

In addition to local plant personnel, Ashland maintains a 24-hour emergency reporting operator in Ashland, Kentucky (1-606/324-1133). This operator has names and phone numbers of personnel in the Corporate Safety, Environmental, & Occupational Safety Departments who can be contacted in the event of an emergency.

The following is a current list of Emergency Coordinators in the order in which they will assume responsibility. In the event of a fire, explosion, spill or release of material the emergency coordinator and his alternates have the authority to commit the resources necessary to implement this contingency plan.

The following is a current list in the order in which they will assume responsibility as alternates.

	Title/Names & Address	Home Phone	Office Phone
1)	District Manager Glenn Meade 720 West Whipp Centerville, Ohio 45459	513/433-2849	513/298-5256
2)	Plant Manager Woody Gilmore 5601 Cobblegate Drive Dayton, Ohio 45449	513/433-3029	513/298-5256
3)	Office Manager Rosemary Weaver 1658 Lindsey Ave. Miamisburg, OH 45342	513/859-8805	513/298-5256
4)	Ashland 24-Hour Emergency Operator		1-606/324-1133

TABLE ONE

EMERGENCY CONTACTS

Emergency	Organization/Agency	Emergency No.
Fire/explosion	Fire Department	513/298-7424
	Police Department	513/298-7424
	Ashland Emergency Operator	606/324-1133
	Ohio EPA Emergency Response Team	1-800/282-9378
	National Response Center	1-800/424-8802
Hazardous material spill/release	Fire Department	513/298-7424
	Police Department	513/298-7424
	Ashland Emergency Operator	606/324-1133
	Ohio EPA Emergency Response Team	1-800/282-9378
	National Response Center	800/424-8802
Injuries	Fire Department	513/298-7424
	Workplace Health	513/865-0071

Ashland

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

ENGINEERING DEPARTMENT
R. O. Spooner
Director of Engineering

February 27, 1986

Mr. Kenneth Chiu
U.S. EPA Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Mr. Chiu:

As you requested enclosed are the revised pages of our Part B application for our Dublin R&D Laboratory to include the underground waste solvent storage tank on the application.

During this review, it was found that the lab is no longer generating or storing plating wastes. These wastes have been removed from the Part A and Part B applications. A signed revised Part A application (Page A-7) will be submitted at a later date.

The financial assurance letter on Pages I-13 to I-23 is dated December 19, 1985 and does not include this February 1986 updated closure cost. When the revised closure plan is approved by you, we will change the cost estimate for this facility and send another financial assurance letter to the Ohio EPA and to you for the Part B application.

If you have additional questions, call me on 614/889-3695.

Sincerely,

Arlene A. Hendrickson

Arlene A. Hendrickson
Environmental Engineer

AAH:dli
Enclosure

cc: Mr. Bob Carey
Ohio EPA - DHMM
361 East Broad Street
Columbus, OH 43216

W.7-2

Ashland

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

ENGINEERING DEPARTMENT
R. O. Spooner
Director of Engineering

July 25, 1985

Mr. Kenneth Chiu
U.S. EPA Region V
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Chiu:

Enclosed is Revision 1 of Drawing No. 6020-ZD-1 of the hazardous waste drum storage area. This drawing was revised to show the addition of a curb south of the well pump. This was done to satisfy one of the conditions on our Part B permit.

Plans call for us to begin construction of this curbing and ramps around the waste storage area prior to the end of this September. I discussed this with Bob Carey who could see no reason to delay construction. If you do not agree, please advise.

If you have further questions, please feel free to call me on 614/889-3695.

Sincerely,

Arlene A. Hendrickson

Arlene A. Hendrickson
Environmental Engineer

AAH:dli
Enclosure

cc: Mr. Bob Carey*
Ohio EPA
361 East Broad Street
Columbus, Ohio 43216-1049

27-17

JUL 31 1985

G.M. BAKER & SON COMPANY
Division of MOODY'S of Dayton, Inc.

305 Hosack Street
Columbus, Ohio 43207
Phone 614-443-3898

ADDRESS REPLY TO:
P.O. DRAWER 509
MIAMISBURG, OHIO 45342

July 29, 1985

Ashland Chemical Company
P.O. Box 2458
Dublin, Ohio 43017

Attention: Arlene Hendrickson

Subject: Well Pump

Ms. Hendrickson:

Recently we inspected the well pump installation with respect to potential contamination due to the proximity of your storage area. The casing of the well is sound and appears to have no entrance points for contamination. The pump presently sits on a steel plate welded to the casing.

In order to add a safty factor to the potential of contamination we might suggest the following:

A. A gas tight well seal be placed between the well and the pump. This could be installed at the time of your next pump maintenance for a cost of $1068.00.

B. The pit be filled with concrete to add additional encasement for the well casing. This concrete need not fill the entire pit, just the volumn from 1' west of the well casing to the east wall. This concrete work can be done by your forces at a time convenient for you.

We hope this information is satisfactory. Should you have any questions, please contact us at your convenience.

Very truly yours,

G. M. BAKER & SON COMPANY DIVISION

Edward S. Schlaack

Edward S. Schlaack
Division Manager

ESS/jd

Ken C

OhioEPA

RE: Franklin County
Ashland Chemical Company
OHD 042311209

Mr. James Mayka
USEPA, Region V (5HW-13)
Waste Management Branch
230 South Dearborn Street
Chicago, IL 60604

Dear Jim:

Attached please find the statement of basis and draft permit for Ashland Chemical Company. We have not included the attachments because USEPA has a copy of the complete application. Special terms and conditions appear as the last item of the permit.

If you have any questions or comments, please call Bob Carey at (614) 466-8934.

Sincerely,

Martha Gibbons, Acct. Mgr.
Engineering Section
Division of Hazardous Materials Management

cc: Steve White, Chief, DSHWM
Rose Freeman, USEPA, Region V
Bob Carey, ES, DSHWM
Steve Rath, CDO
File #01-25-0118

Attachment

BC/jm
1494T

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

ENGINEERING DEPARTMENT
R. O. Spooner
Director of Engineering

June 17, 1985

Mr. Kenneth Chiu
U.S. EPA Region V
230 South Dearborn Street
Chicago, IL 60604

Dear Mr. Chiu:

Enclosed are revised pages in Section F of the Part B application for our Dublin R&D facility (OHD042311209). Page F-2 Section F-2a, Page F-2.1 Section F-2c, Page F-3 Log, and Page F-8 Section F-4a have been changed to indicate that loading of drums will be done on the drum storage pad. When I receive a proposal on well improvements from G. M. Baker, the well drilling company which installed the well, I will incorporate this information in Section B-2.

If you have any questions, please feel free to call me on 614/889-3695.

Sincerely,

Arlene A. Hendrickson

Arlene A. Hendrickson
Environmental Engineer

AAH:dli
Enclosure

cc: Mr. Bob Carey
Ohio EPA
361 East Broad Street
Columbus, OH 43216-1049

267-15

MAR 1 9 1985

5HS-13

Dan Redman, Supervisor
Engineering Section
Division of Solid and Hazardous
Waste Management
361 East Broad Street
P.O. Box 1049
Columbus, Ohio 43216

Re: Ashland Chemical Company
OHD 042-511-209

Dear Mr. Redman:

We have determined that the Part B application for the above-referenced facility is complete enough to begin the technical adequacy review. We now ask your office to perform a detailed technical evaluation of the application materials to ensure conformance with all applicable 40 CFR Part 264 standards. We would like the technical review to be done by April 30, 1985. Please have the permit writer assigned to this facility forward us a copy of any adequacy review letter that is prepared.

As you know, additional requirements may result from the Hazardous and Solid Waste Amendments of 1984. You will be notified of any additional requirements so that you can incorporate them into the adequacy checks of the Part B application.

Please submit your "preliminary staff determination" (PSD) to us by June 15, 1985. The PSD should contain (a) a draft permit, (2) a "notice of intent to deny", or (c) a determination, with justification, that an additional specified period of time is necessary to complete the evaluation. The PSD should also include a fact sheet, or statement of basis, as appropriate.

Please contact Mr. Ken Chiu, the responsible person on my staff, at (312) 886-6181, if you have any questions.

Sincerely yours,

Edith H. Ardiente, P.E.
Chief, Technical Programs Section

cc: Tim Lawrence, OEPA-CDO

Arlene Hendrickson,
Ashland Chemical Company

5HS-13:KCHIU:PG:3/7/85

PG 3/8/85 kchiu 3/12/85 DJB 3/14/85

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

ENGINEERING DEPARTMENT
R. O. Spooner
Director of Engineering

January 15, 1985

Mr. William H. Miner
US Environmental Protection Agency
Region V
230 S. Dearborn St.
Chicago, IL 60604

Dear Mr. Miner:

Enclosed is the response to the completeness checklist which was sent to me on the RCRA Part B Application for the Ashland Chemical Dublin R&D Lab (OHD-042-311-209). Revised copies of the pages in the Part B application are also enclosed.

If you have any questions on these, please feel free to call me directly on 614/889-3695.

Very truly yours,

A A Hendrickson

A. A. Hendrickson
Environmental Engineer

AAH:sc
Enclosure

cc: Ohio Environmental Protection Agency
Division of Solid & Hazardous Waste
361 E. Broad St.
Columbus, OH 43216

Response To Completeness Checklist on Part B Application
Ashland Chemical Company
(OHD-042-311-209)

1. Page one of Form 1 was inverted when copied. A copy of the page is enclosed.

2. As the generator of these hazardous wastes it is our responsibility under 262.11 to determine whether the waste is a listed waste in Subpart D or a characteristic waste under Subpart C. In reviewing our Part A application given on Page A-6, (A revised page A-6 is enclosed which gives the unit of measure on line 1 as P for pounds. This was omitted from Revision 0) it is evident that the majority of our wastes are characteristic wastes identified by a D EPA hazard waste number. Therefore, we are applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used. As a chemical research lab we are using the knowledge of the chemists and technicians in filling out the Chemical Waste Profile Sheet which is given on Page C-6. Several copies of representative Chemical Waste Profile Sheets are given on pages C-7 to C-11. These are our lab reports.

3. Copies of the methods used to meet additional waste analysis requirements are on page C-12 and following pages.

4. You are correct this is not specifically mentioned. Page D-2 has been changed to reflect this.

5. This statement in the Part B on page F-1 is in error. The main gate is only open during operating hours of the plant. It is locked every night and on weekends by our guard. This area is also used for drum storage of raw materials and is therefore open during the day for access to these materials. The main gate is located across from our R&D loading dock and is visible from our loading dock during operating hours.

6. Page F-2.1 has been added to describe procedures for ensuring that remedial action is taken when inspections reveal problems.

7. Please be advised that Ashland has decided to remove the solvent tank from the Part A and Part B applications. The rationale for this is described on page B-2 of the Part B application.

8. The location of emergency equipment related to hazardous waste storage is shown on the map on page G-38.1 in the Contingency Plan.

9. The coordination agreement section on page G-4.1 has been amended to be more specific.

10. Attachment II starting on page H-40 of the Part B permit application contains outlines of the training programs for the various positions associated with managing waste in the R&D Laboratory. Content, frequency and techniques used are presented here.

11. Relevance of training to job position is presented in Attachment II, page H-40.

12. Page H-3 has been amended to indicate that this training must be done within six months of the employee being hired into this position.

13. The design capacity of the storage area is 440 drums. However, we will be permitted to store only 400 drums and will not store over 400 drums. The design arrangement allows us the flexibility to store incompatible wastes in separate rows which may or may not be full. For example, we may store 80 drums in each of the 4 rows on the west side of the storage area. 30 drums in row 5, containing a waste which is incompatible with row 6 or row 7, 30 drums in row 6 containing a waste which is incompatible with row 5 or row 7, and 20 drums in row 7 containing a waste which is incompatible with row 5 or row 6 waste. This would give us a total of 400 drums but allow us also to store 3 wastes which are incompatible. We could store as many as 7 incompatible types of wastes; but it is doubtful that we will ever have that many incompatible waste types.

14. The criteria used to determine contamination is described on revised page I-4 under Closure of Container Storage Area.

15. You are correct, the FAM cost estimate provided in the Part B does not match the cost estimate on page I-8. At the time this Part B was submitted we were in the process of updating the FAM within 90 days of the end of our fiscal year. Therefore, I included the October, 1984 cost estimate in the update. Pages I-10 to I-21 have been revised due to the addition of the updated FAM.

DEC 1 0 1984

Ms. Ariane Hendrickson
Environmental Engineer
Ashland Chemical Company
P.O. Box 2219
Columbus, Ohio 43216

RE: Notice of Deficiency
Part B Application
Ashland Chemical Co. (Dublin)
OHD-042-711-209

Dear Ms. Hendrickson:

Thank you for submitting Part B of the Resource Conservation and Recovery Act (RCRA) permit application for your facility.

This letter is to notify you, as required by 40 CFR 124.3(c), that we have reviewed the application and have determined it to be incomplete. The additional information you must provide to make it complete is described on the enclosed checklist and comment pages. This information must be submitted by January 15, 1985, so that we can promptly initiate a more in-depth review. Our objective is to make a permit decision on your application in a timely manner, with a minimum exchange of correspondence. Should you not understand what information we are requesting, or the level of detail we expect, please call immediately and/or schedule a meeting to our offices to discuss the matter.

Please ensure that the requested information is prepared in a format such that we can readily insert it in appropriate places in the application. Two copies of the information should be submitted to our office, with another two copies provided to the Ohio Environmental Protection Agency, Division of Solid and Hazardous Waste, 361 East Broad Street, Columbus, Ohio 43216.

If you have any questions, please contact James Hayka of my staff at (312) 353-2197.

Sincerely,

William E. Muno, Chief
Technical, Permits and Compliance Section

Enclosures

cc: Tom Crepeau/OEPA
Debbie Yeager/OEPA CO

5HW-13:J.Hayka:jt:12/3/84

261-7

	TYPIST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPS CHIEF	WMB CHIEF	WMD DIRECTOR
INITIALS	J. Barnes	JH		DJB		WHM		
DATE	12/3/84	12/3/84		12/6/84		12/10/84		

OMR 12/10

NOV 1 9 1984

Thomas Crepeau, Chief
Permits and Manifest Records Section
Division of Solid and Hazardous Waste Management
Ohio Environmental Protection Agency
361 East Broad Street, P.O. Box 1049
Columbus, Ohio 43216

RE: RCRA Part B Permit Application
Ashland Chemical Company (Dublin)
OHD-042-311-209

Dear Mr. Crepeau:

The above-referenced facility has advised us that two copies of the Part B application have been forwarded directly to your Agency. We request that you prepare (1) a completeness checklist, (2) written comments and (3) either a notice of deficiency letter or notice of completeness letter -- forwarding these items so that they are received in our office no later than December 19, 1984.

Please contact Mr. James Mayka, the U.S. Environmental Protection Agency permit writer for this facility, at (312) 886-6189, if you have any questions regarding the application.

Sincerely,
ORIGINAL SIGNED BY
WILLIAM H. MINER

William H. Miner, Chief
Technical, Permits, and Compliance Section

bcc: Jim Mayka, Ohio SIO
Rose Freeman, Ohio SS

5HW-13:J.Mayka:J.Turner:11-15-84

	TYPIST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPS CHIEF	WMB CHIEF	WMD DIRECTOR
INITIALS	J.T.			DJS				
DATE	11-15-84	11/15/84		11/15		11/19/84		

emm 11/26-84

267-6

OhioEPA

RE: Ashland Chemical, Dublin
OHD042311209 G, TRS, TSD, PA

November 8, 1984

Mr. James Mayka
U.S. Environmental Protection Agency
230 South Dearborn Avenue
Chicago, Illinois 60604

Dear Jim:

Recently we completed our first completeness review of the Part B RCRA application for the Ashland Chemical facility in Dublin. Although there were several deficiencies, mainly in the waste analysis area, we feel that the application is substantially complete and that another completeness review is probably not warranted. Therefore, with your concurrence, we will begin our adequacy review of this application.

Any deficiencies have been noted on the enclosed checklist, as usual. If you have questions or comments concerning this review, please do not hesitate to contact Tim Lawrence of my staff at (614) 466-8934.

Sincerely,

Dan Redman

Dan T. Redman, P.E.
Manager
Engineering Section
Division of Solid and Hazardous Waste Management

DTR:vs
1062T

Enclosure

cc: Rose Freeman, USEPA
Tom Crepeau, DMS
Debbie Unger, CDO
Tim Lawrence

267-3

MAR 26 1984

5HW-13

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Arlene A. Hendrickson
Environmental Engineer
Ashland Chemical Company
P.O. Box 2219
Columbus, Ohio 43216

RE: Ashland Chemical Company
Dublin, Ohio
U.S. EPA ID #: OHD-042-311-209

Dear Ms. Hendrickson:

By now you should have received an acknowledgment of our receipt of the Part A permit application material for the above-referenced hazardous waste facility under the Resource Conservation and Recovery Act (RCRA) permit program.

Accordingly, this letter constitutes the next step in the formal process leading toward issuance or denial of an RCRA permit. Under the authority of 40 CFR 270.10, this is a formal request for submittal of Part B of the permit application for the above-referenced facility.

Enclosed is a copy of 40 CFR 270 which lists the items required in the Part B permit application for the facility. The Part B application must be submitted in quintuplicate and postmarked no later than October 26, 1984. Please uniquely number each page of the application including all attachments (maps, specifications, etc.). A statement identical to the one stated in 40 CFR 270.11 must accompany the application and all additional submittals.

Send two copies to:

RCRA ACTIVITIES
Part B Permit Application
U.S. EPA, Region V
P.O. Box A3587
Chicago, Illinois 60609-3587

Send three copies to:

Thomas Crepeau
State of Ohio EPA-DHMM
361 East Broad Street
P.O. Box 1049
Columbus, Ohio 43216

We will coordinate review of the application with the Ohio Environmental Protection Agency and the Hazardous Waste Facility Approval Board. We are committed to conducting the RCRA permit process as efficiently as possible. Consequently, I suggest you contact James Mayka of my staff, at (312) 886-6189, as you begin preparing your application. Mr. Mayka will be available to discuss specific needs of your application or to meet with you in Chicago.

Failure to furnish the complete Part B permit application by the above date, and to provide in full all required information, is grounds for termination of interim status under 40 CFR 270.10.

Information you submit in the Part B permit application can be disclosed to the public, according to the Freedom of Information Act and U.S. Environmental Protection Agency (U.S. EPA) Freedom of Information regulations. If you wish, however, you may assert a claim of business confidentiality by printing the word "Confidential" on each page of the application which you believe contains confidential business information. U.S. EPA will review business confidentiality claims under regulations at 40 CFR Part 2, and will later request substantiation of any claims. Please review these rules carefully before making a claim.

If you claim parts of the application as confidential, please provide us and the State with a public information copy of the application. The public information copy must be identical to the full application with the exclusion of the confidential information.

We have also enclosed a copy of 40 CFR Part 264 which includes technical standards for the operation of treatment, storage and disposal facilities. These standards would become applicable upon issuance of an RCRA permit to the facility by U.S. EPA. Also enclosed for your use is a copy of our "Guidance For Permit Application Preparation" which should help you avoid the typical deficiencies found in previous application submittals.

We look forward to receiving your Part B permit application.

Sincerely yours,

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

Enclosures: 40 CFR 270
40 CFR 264
Guidance for Permit Application Preparation

cc: Tim Lawrence, OEPA
Phil Scott, HWFAB

bcc: Permit Contact
Dan Banaszek

5HW-13:D. Banaszek:jt:3/8/84

INITIALS / DATE	TYPIST	AUTHOR	STU #1 CHIEF	STU #2 CHIEF	STU #3 CHIEF	TPU CHIEF	WMB CHIEF	DIRECTOR
	jt 3/12/84	3/15/84		DJB 3/23/84		for HC 3/26/84	KVK 3/26/84	

Mednick

RCRA DRAFT PERMIT SIGN-OFF

PART I. BACKGROUND

FACILITY NAME: Ashland Chemical Company, R & D Lab.

FACILITY LOCATION: 5200 Blazer Parkway, Dublin, Ohio 43017

RCRA ID NUMBER: OHD 042 [illegible] 209

TYPE OF PERMIT

X Storage	___ Treatment	___ Disposal
X Container	___ Tank	___ Injection Well
___ Tank	___ Surface Impoundment	___ Landfill
___ Waste Pile	___ Incinerator	___ Land Application
___ Surface Impoundment	___ Other	___ Surface Impoundment

PART II. REVIEW PACKAGE CONTENT

- X Draft Permit w/Attachments
- ___ Draft Public Notice
- X Administrative Record, including
  - X Corrective Action Certification
  - X Screening for Environmental Significance
  - ___ Facility Management Plan (if applicable)
- X (Other) Statement of Basis

PART III. CONCURRENCES

	INITIALS	DATE	AGREE	DISAGREE
1. TECH. PERMIT CONTACT	[illegible]	12/11/85	(X)	( )
2. Acting CHIEF, STATE TECHNICAL UNIT	[illegible]	12/6/85	(X)	( )
3. ~~TECHNICAL EXPERT~~ (If applicable)	___	___	( )	( )
4. SECTION CHIEF, TPS	[illegible]	12/18/85	(X)	( )
5. SECTION CHIEF, AIS	[illegible]	12/20/85	(X)	( )
6. ASST. REG. COUNSEL, (ORC) Mednick	___	___	( )	( )
7. SECTION CHIEF SWERB (ORC)	___	___	( )	( )
8. BRANCH CHIEF, SWERB (ORC) ELAN	___	___	( )	( )
9. CHIEF, SOLID WASTE BRANCH	___	___	( )	( )

PART IV PUBLIC NOTICE

10. CHIEF, AUTHORIZATION AND INFORMATION SECTION	___	___
11. PUBLIC PARTICIPATION SPECIALIST	___	___

___
Public Notice Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
HAZARDOUS WASTE MANAGEMENT PERMIT

Name of Permittee: Ashland Chemical Company Research and Development Laboratories

Facility Location: 5200 Blazer Parkway, Dublin, Ohio 43017

EPA Identification Number: OHD 042 511 209

Effective Date:

Expiration Date: This permit shall have a 10 year duration

Authorized Activities

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C., §6901 et seq., commonly known as RCRA) and the 1984 Hazardous and Solid Waste Amendments, and regulations promulgated thereunder by the U.S. Environmental Protection Agency (U.S. EPA) codified and to be codified in Title 40 of the Code of Federal Regulations, a permit is issued to Ashland Chemical Company - R & D Laboratories (hereafter called the Permittee) to operate a hazardous waste storage facility located in Dublin, Ohio at latitude 40 degrees 05'026" and longitude 083 degrees 08'007". You are authorized to conduct the following hazardous waste management activities:

X Storage	___ Treatment	___ Disposal
X Container	___ Tank	___ Injection Well
___ Tank	___ Surface Impoundment	___ Landfill
___ Waste Pile	___ Incinerator	___ Land Application
___ Surface Impoundment	___ Other	___ Surface Impoundment

Applicable Regulations:

The conditions of this permit were developed in accordance with the applicable provisions of 40 CFR Part:

X 261	___ 264, Subpart G	___ 264, Subpart K
X 262	___ 264, Subpart H	___ 264, Subpart L
X 264, Subpart A-E	X 264, Subpart I	___ 264, Subpart O
___ 264, Subpart F	___ 264, Subpart J	X 270
X HSWA		

Permit Approval:

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 260 through 264, 270 and 124 as specified in the permit, and relevant provisions of HSWA. Applicable regulations are those which are in effect on the date of issuance of this permit (see 40 CFR §270.32(c)).

This permit is based on the assumption that the information submitted in the permit application attached to the Permittee's letter dated November 2, 1984, as modified, and any subsequent amendments (hereafter referred to as the application) is accurate and that the Facility will be constructed and/or operated as specified in the application. Any inaccuracies found in this information may be grounds for the termination or modification of this permit (see 40 CFR §270.42 and §270.43) and potential enforcement action. Further, this permit is issued with the assumption that permittee's certification as to solid waste management units and releases of hazardous wastes or constituents is correct. The Permittee must inform U.S. EPA of any deviation from or changes in the information in the application or, in the Permittee's knowledge of solid waste management units and/or releases which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit is effective as of _____, and shall remain in effect until _____, unless revoked and reissued, or terminated (40 CFR §270.41 and .43 and HSWA) or continued in accordance with 40 CFR §270.51.

Issued this_____ day of _____

by_____
Basil G. Constantelos, Director
Waste Management Division

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042 511 209

PERMIT INDEX

Permit Conditions

ATTACHMENTS

STATEMENT OF BASIS

Ashland Chemical Company
Research and Development Laboratory
OHD 042 511 209

This is a statement of basis for the Draft Hazardous Waste Permit for the subject facility. It briefly describes the derivation of the conditions of the draft permit and the reasons for them. Under 40 CFR§124.7 (Title 40 of the Code of Federal Regulations, Section 124.7), the statement of basis is sent to the applicant and to any other person who requests it.

A. FACILITY DESCRIPTION

1. Resource Conservation and Recovery Act (RCRA) Activities

The Ashland Chemical Company, Research and Development Laboratory is located at 5200 Blazer Parkway, Dublin, Ohio. This laboratory is the main research and development (R&D) facility for Ashland Chemical. Primary research at the Facility includes carbon black, foundry products, polyester resins, specialty polymers, adhesives, electronic and laboratory chemicals and solvents, and polymers. The majority of the wastes which result from this research are stored in 55 gallon drums at the facility. Another source of waste at the facility is the reactors in the pilot plant. Washed solvents which have been used to clean the reactors are stored in an 8000 gallon underground tank at the facility. The wastes from the reactors are sold as a fuel product, and qualify as wastes which are exempt from part B permit requirements per §262.34.

2. Permit Actions Other than RCRA

a. Drinking Water and Wastewater

Potable water and process water are pumped from the on-site well. This well is exempt from the State drinking water permitting system. Ashland Chemical discharges to the City of Columbus sanitary sewer system, therefore, a National Pollutant Discharge Elimination System (NPDES) permit is not required for the facility.

b. Air

Ashland Chemical has been issued permits by the Ohio Environmental Protection Agency (OEPA), Central District, which restrict air emissions from the following sources at the facility:

1. R & D spray booth;
2. Carbon black pilot plant;
3. Chemical reactor; and
4. R & D laboratory

All sources discharge through a common air filter system.

c. Other Federal Acts Considered

Based upon present information, no other Federal permits are required for Ashland Chemical Company Research and Development Laboratory. Also based on present information, the Facility will not have any adverse effect on the historical, architectural, archeological or cultural characteristics of the properties either listed or eligible for listing on the National Register for Historical places.

B. PERMIT APPLICATION

The permit application cited herein is the November 2, 1984, permit application, as amended on January 16, 1985, and June 17, 1985.

C. PURPOSE OF THE PERMITTING PROCESS

The purpose of the permitting process is to afford the United States Environmental Protection Agency (U.S. EPA), interested citizens, and other governmental agencies the opportunity to evaluate the ability of the applicant to comply with the applicable hazardous waste management requirements of RCRA. The U.S. EPA is required to prepare a draft permit which sets forth in one concise document all the applicable RCRA requirements with which the Permittee must comply during the ten year duration of the permit.

On November 8, 1984, the Hazardous and Solid Waste Amendments of 1984 (HSWA) were enacted to modify RCRA. Under Section 206 of the HSWA, all RCRA permits issued after the date of enactment of the HSWA must provide for corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a facility, regardless of the time at which such waste was placed in the unit.

D. PROCEDURES FOR REACHING A FINAL DECISION

Under Section 7004(b) of RCRA, 42 U.S.C. §6974(b) and 40 CFR 124.10, the public is allowed forty five days to review the permit application, and comment on the draft permit conditions and the corrective action statement for the Facility. After the close of the public comment period, the U.S. EPA Regional Administrator will issue a final permit decision. The public comment period will begin on the date of publication of the public notice in a major local newspaper of general circulation, or on the date of broadcast of the public notice over a local radio station, whichever is later. When the Regional Administrator of the U.S. EPA issues a final permit decision, notice will be given to the applicant and each person who has submitted written comments, requested a change in the draft permit conditions, or commented on the corrective action statement. If none of the comments received requested a change in the draft permit conditions, or challenged the corrective action statement, the permit will become effective immediately upon issuance of the permit. Otherwise, a final permit decision shall become effective thirty (30) days after service of notice of the decision, unless a later date is specified in the decision, review is requested under 40 CFR§124.19, or an evidentary hearing is requested under 40 CFR§124.74.

The issuance of a Hazardous Waste Management Permit will be coordinated by both the U.S. EPA and the Ohio Environmental Protection Agency (OEPA). Each Agency has regulations which require a permit to be issued for all facilities which treat, store, or dispose of hazardous waste. At the present time, the U.S. EPA regulations would govern the issuance of a Hazardous Waste Management Permit. However, if the State of Ohio receives Phase II interim authorization for the hazardous waste program, the State will assume the administration of the Federal hazardous waste permitting program in Ohio and this permit.

E. BRIEF SUMMARY OF THE PERMIT CONDITIONS

This section provides a brief summary of the conditions in the draft permit. The column titled "Regulation" provides the regulatory authority for the permit condition specified in the column titled "Permit Condition."

I. STANDARD CONDITIONS

Permit conditions I.A to I.H are regulatory requirements of 40 CFR Part 270. These conditions are of a general nature and are applicable to all hazardous waste management facilities regulated pursuant to a U.S. EPA RCRA permit.

Permit Condition	Subject	Regulation (40 CFR)
I.A	Effect of Permit	§§270.4 & 270.30(g)
I.B	Permit Actions	§§270.30(f), 270.41, 270.42, 270.43 & 264.112
I.C	Severability	Standard Practice
I.D.1	Duty to Comply	§270.30(a)
I.D.2	Duty to Reapply	§§270.30(b) & 270.10(h)
I.D.3	Permit Expiration	§270.51
I.D.4	Need to Halt or Reduce Activity not a Defense	§270.30(c)
I.D.5	Duty to Mitigate	§270.30(d)
I.D.6	Proper Operation and Maintenance	§270.30(e)
I.D.7	Duty to Provide Information	§§270.30(h) & 264.74(a)
I.D.8	Inspection and Entry	§270.30(i)
I.D.9	Monitoring and Records	§270.30(j)
I.D.10	Reporting Planned Changes	§270.30(l)(1)
I.D.11	Certification of Construction Modification	§270.30(l)(2)
I.D.12	Anticipated Noncompliance	§270.30(l)(2)
I.D.13	Transfer of Permits	§270.30(1)(3), 270.40 & 264.12(c)
I.D.14	Compliance Schedules	§§270.30(1)(5) & 270.33
I.D.15	Twenty-Four Hour Reporting	§§270.30(1)(6) & 264.56 (d), (i) and (j)
I.D.16.	Other Noncompliance	§270.30(1)(10)

Permit Condition	Subject	Regulation (40 CFR)
I.D.17	Other Information	§270.30(l)(11)
I.D.18	Submitttal of Reports or other Information	§270.50(h)
I.E	Signatory Requirement	§§270.11 & 270.30(k)
I.F	Confidential Information	§270.12
I.G	Not Used	
I.H	Documents To Be Maintained At Facility Site	§§264.13(b), 264.16(d), 264.53(a), 264.112(a) 264.142(a), 264.73, and 264.15(b)

II. GENERAL FACILITY CONDITIONS

Permit Condition	Subject	Regulation (40 CFR)
II.A.	Design and Operation of Facility	§264.31
II.B.	Required Notice	§264.12
II.C.	General Waste Analysis	§264.13
II.D.	Security	§264.14
II.E.	General Inspection Requirements	§264.15
II.F.	Personnel Training	§264.16
II.G.	General Requirements for Ignitable, Reactive and Incompatible Waste	§264.17
II.H.	Location Standards	Not Applicable
II.I.1.	Required Equipment	§264.32
II.I.2.	Testing and Maintenance of Equipment	§264.33
II.I.3.	Access to Communications or Alarm System	§264.34
II.I.4.	Required Aisle Space	§264.35
II.I.5.	Local Authorities	§264.37
II.J.1.	Implementation of Contingency Plan	§264.51
II.J.2.	Copies of the Contingency Plan	§264.53
II.J.3.	Amendments to the Contingency Plan	§264.54
II.J.4.	Emergency Coordinator	§264.55
II.K.	Manifest System	§§264.71, 264.72, 264.76, 270.30(1)(7), and 270.30(1)(8)
II.L.1	Operating Record	§§264.73 and 270.30(j)(2)
II.L.2.	Biennial Report	§§264.75, and 270.30(1)(9)

Permit Condition	Subject	Regulation (40 CFR)
II.M.1.	Closure Performance Standard	§264.111
II.M.2.	Amendment to Closure Plan	§264.112(b)
II.M.3.	Notification of Closure	§264.112(c)
II.M.4.	Time Allowed for Closure	§264.113
II.M.5.	Disposal or Decontamination of Equipment	§264.114
II.M.6.	Certification of Closure	§264.115
II.N	Closure Cost Estimate	§264.142
II.O.	Financial Assurance for Facility Closure	§264.143
II.P.	Liability Requirements	§264.147
II.Q.	Incapacity of Owners or Operators, Generators or Financial Institutions	§264.148
II.R.	Financial Assurance and Documentation Requirements	§§264.143, 264.147 and 264.149
II.S.	Waste Minimization	§264.73(b)(9)

Permit Conditions	Subject	Regulation (40 CFR)
III.	STORAGE IN CONTAINERS	
III.A.	Waste Identification	§264.112(a)(2)
III.B.	Condition of Containers	§264.171
III.C	Compatibility of Wastes with Containers	§264.172
III.D.	Management of Containers	§264.173
III.E.	Containment	§264.175
III.F.	Special Requirements for Ignitable or Reactive Waste	§264.176
III.G.	Special Requirements for Incompatible Waste	§264.177
III.H.	Storage of Hazardous Waste Prohibited from Land Disposal	

I. STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store hazardous waste in accordance with the conditions of this permit. Any management of hazardous waste not authorized in this permit, the RCRA regulations, or the HSWA is prohibited. Compliance with this permit constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA. Issuance of this permit does not convey property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought Sections 3013, 3008, or 7003 of RCRA, Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9606 (a), commonly known as CERCLA), or any other law providing for protection of public health or the environment.

B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR§§270.41, 270.42, and 270.43. This permit may also be reviewed and modified at any time by the U.S. EPA with consideration of improvements in the state of control and measurement technology and to include any terms and conditions as determined necessary to protect human health and the environment pursuant to HSWA 3005(b)(3). The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remaining provisions of this permit shall not be affected thereby.

D. DUTIES AND REQUIREMENTS

1. Duty to Comply. The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. (See 40 CFR §270.61). Any permit noncompliance, other than non-compliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; for denial of a permit renewal application; or for any other appropriate action.

2. Duty to Reapply. If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee shall submit a complete application for a new permit at least 180 days before this permit expires, unless permission for a later date has been granted by the Regional Administrator.

3. Permit Expiration. This permit and all conditions herein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application (see 40 CFR 270.13 - 270.16) and through no fault of the Permittee the Regional Administrator has not issued a new permit as set forth in 40 CFR 270.51.

4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of the permit.

7. Duty to Provide Information. The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry. The Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

   (a) Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

9. Monitoring and Records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, July, 1982; Methods for Chemical Analysis of Water and Wastes, EPA-600/ 4-79-020, March 1979; or an equivalent method as specified in the attached Waste Analysis Plan, Attachment I hereto.

(b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or record. These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

(c) Records of monitoring information shall specify:

(i) The date(s), exact place, and times of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical technique(s) or method(s) used; and

(vi) The result(s) of such analyses.

10. Report Planned Changes. The Permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility.

11. Certification of Construction Modification. The Permittee may not commence storage of hazardous waste at the Facility until:

    (a) The Permittee has submitted to the Regional Administrator by certified mail or hand delivery a letter signed by the Permittee and a registered professional engineer stating that the Facility has been constructed or modified in compliance with the permit; and

    (b) (i) The Regional Administrator has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

    (ii) The Regional Administrator has either waived the inspection or has not within 15 days notified the Permittee of his or her intent to inspect.

    (Note: This condition only applies to newly permitted facilities or to permitted facilities which have been modified.)

12. Anticipated Noncompliance. The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Such notice does not constitute a waiver of the Permittee's duty to comply with permit requirements.

13. Transfer of Permits. This permit may be transferred to a new owner or operator only if the permit is modified or revoked and reissued pursuant to 40 CFR§270.41(b)(2) or§270.42(d). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and all applicable corrective action requirements.

14. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

15. Twenty-four Hour Reporting. The Permittee shall report to the Regional Administrator any noncompliance with the permit which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:

    (a) Information concerning the release of any hazardous waste which may endanger public drinking water supplies.

    (b) Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the Facility, which could threaten the environment or human health outside the Facility. The description of the occurrence and its cause shall include:

(i) Name, address, and telephone number of the owner or operator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident;

(iv) Name and quantity of materials involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazards to the environment and human health outside the facility, where applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee need not comply with the five day written notice requirement if the Regional Administrator waives the requirement and the Permittee submits a written report within fifteen days of the time the Permittee becomes aware of the circumstances.

16. Other Noncompliance. The Permittee shall report all other instances of noncompliance not otherwise required to be reported under condition I.D. 15 at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in condition I.D.15.

17. Other Information. Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, the Permittee shall promptly submit such facts or information.

18. Submittal of Reports or Other Information. All reports or other information required to be submitted by the terms of this permit shall be sent to:

RCRA Activities
U.S. EPA, Region V
P.O. Box A3587
Chicago, Illinois 60690-3587

E. Signatory Requirement. All reports or other information requested by the Regional Administrator shall be signed and certified as required by 40 CFR §270.11.

F. Confidential Information. The Permittee may claim confidential any information required to be submitted by this permit in accordance with 40 CFR§270.12

G. Documents To Be Submitted Prior to Operation. None

H. Documents To Be Maintained at Facility Site. The Permittee shall maintain at the Facility, until closure is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

(1) Waste analysis plan as required by 40 CFR§264.13(b) and this permit.

(2) Inspection schedules as required by 40 CFR§264.15(b) and this permit.

(3) Contingency plan as required by 40 CFR§264.53(a) and this permit.

(4) Closure plan as required by 40 CFR§264.112(a) and this permit.

(5) Cost estimate for facility closure as required by 40 CFR§264.142(d) and this permit.

(6) Operating record as required by 40 CFR§264.73 and this permit.

(7) Personnel training documents and records as required by 40 CFR§264.16(d) and this permit.

II. GENERAL FACILITY CONDITIONS

A. Design and Operation of Facility. The Permittee shall maintain and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.

B. Required Notice.

(1) The Permittee shall notify the Regional Administrator in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required.

(2) When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), he must inform the generator in writing that he has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. (See Condition II.L.1).

C. General Waste Analysis. The Permittee shall follow the procedures described in the attached Waste Analysis Plan, Attachment I.

D. Security. The Permittee shall comply with the security provisions of 40 CFR§264.14(b) and (c).

E. General Inspection Requirements. The Permittee shall follow the inspection schedule, Attachment II. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 40 CFR§264.15(c). Records of inspections shall be kept as required by 40 CFR§264.15(d).

F. Personnel Training. The Permittee shall conduct personnel training as required by 40 CFR§264.16. This training program shall follow the attached outline, Attachment III. The Permittee shall maintain training documents and records as required by 40 CFR§264.16(d) and (e).

G. General Requirements for Ignitable, Reactive, or Incompatible Waste. The Permittee shall comply with the requirements of 40 CFR§264.17(a).

H. Location Standards.

(NOT APPLICABLE)

I. Preparedness and Prevention

1. Required Equipment. At a minimum, the Permittee shall equip the Facility with the equipment set forth in the Contingency Plan, Attachment IV, as required by 40 CFR§264.32.

2. Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in Condition II.I.1. as necessary to assure its proper operation in time of emergency. Such testing and maintenance activities are set forth in the Inspection Plan, Attachment II.

3. Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system as required by 40 CFR§264.34.

4. Required Aisle Space. At a minimum, the Permittee shall maintain aisle space as required by 40 CFR§264.35.

5. Arrangements with Local Authorities. The Permittee shall attempt to make arrangements with State and local authorities as required by 40 CFR §264.37. If State or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

J. Contingency Plan.

1. Implementation of Plan. The Permittee shall immediately carry out the provisions of the Contingency Plan, Attachment IV, and follow the emergency procedures described by 40 CFR§264.56 whenever there is a fire, explosion, or release of hazardous waste or constituents which threatens or could threaten human health or the environment.

2. Copies of Plan. The Permittee shall comply with the requirements of 40 CFR§264.53.

3. Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 CFR§264.54.

4. Emergency Coordinator. The Permittee shall comply with the requirements of 40 CFR§264.55, concerning the emergency coordinator.

K. Manifest System. The Permittee shall comply with the manifest requirements of 40 CFR§264.71, 264.72, and 264.76.

L. Recordkeeping and Reporting.

1. Operating Record. The Permittee shall maintain a written operating record at the Facility in accordance with 40 CFR§264.73(a), (b)(1), (2), (3), (4), (5), and (8).

2. Biennial Report. The Permittee shall comply with the biennial report requirements of 40 CFR§264.75.

M. Closure.

1. Performance Standard. The Permittee shall close the Facility as required by 40 CFR§264.111 and in accordance with the Closure Plan, Attachment V.

2. Amendment to Closure Plan. The Permittee shall amend the Closure Plan in accordance with 40 CFR§264.112(b) whenever necessary.

3. Notification of Closure. The Permittee shall notify the Regional Administrator at least 180 days prior to the date he expects to begin closure.

4. Time Allowed For Closure. After receiving the final volume of hazardous waste, the Permittee shall remove from the site all hazardous waste in accordance with the schedule specified in the Closure Plan, Attachment V. After receiving the final volume of hazardous waste, the Permittee shall complete closure activities in accordance with the schedule specified in the Closure Plan, Attachment V.

5. Disposal or Decontamination of Equipment. When closure is completed, the Permittee shall decontaminate and/or dispose of all Facility equipment as required by 40 CFR§264.114 and the Closure Plan, Attachment V.

6. Certification of Closure. When closure is completed, the Permittee shall certify to the Regional Administrator that the Facility has been closed in accordance with the specifications in the Closure Plan as required by 40 CFR§264.115.

N. Cost Estimate for Facility Closure. The Permittee's original closure cost estimate, prepared in accordance with 40 CFR§264.142(a), is specified in Attachment V.

1. The Permittee must adjust the closure cost estimate for inflation within 30 days after each anniversary of the date on which the first closure cost estimate was prepared, as required by 40 CFR§264.142(b).

2. The Permittee must revise the closure cost estimate whenever there is a change in the Facility's closure plan as required by 40 CFR§264.142(c).

3. The Permittee must keep at the Facility the latest closure cost estimate as required by 40 CFR§264.142(d).

O. Financial Assurance for Facility Closure. The Permittee shall demonstrate continuous compliance with 40 CFR§264.143 by providing documentation of financial assurance, as required by 40 CFR§264.151, in at least the amount of the cost estimates required by permit condition II.N. Changes in financial assurance mechanisms must be approved by the Regional Administrator pursuant to 40 CFR§264.143.

P. Liability Requirements. The Permittee shall demonstrate continuous compliance with the requirements of 40 CFR§264.147 and the documentation requirements of 40 CFR§264.151, including the requirements to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs.

Q. Incapacity of Owners or Operators, Guarantors, or Financial Institutions.

The Permittee shall comply with 40 CFR§264.148 whenever necessary.

R. Financial Assurance and Documentation Requirements.

1. Where the requirements of 40 CFR§§264.143 and 264.147 are met through the use of a State-required mechanism pursuant to §264.149, documentation shall be made out to the Director of Hazardous Materials Management Division, Ohio Environmental Protection Agency, 361 East Broad Street, Columbus, Ohio 43216. Copies shall be submitted to U.S. EPA, Region V office at the address specified in condition I.D.18.

2. In all other instances, documents shall be made out to the Regional Administrator, and original documents shall be submitted to U.S. EPA, Region V office.

S. Waste Minimization. The Permittee must certify, at least annually, that he has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment or storage is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment, pursuant to 40 CFR§264.73(b)(9).

III. STORAGE IN CONTAINERS

A. Waste Identification. The Permittee may store a total volume of 22,000 gallons of the following wastes in containers at the Facility, subject to the terms of this permit:

D001 - Waste exhibiting the characteristic of ignitability per 40 CFR§261.21.

D002 - Waste exhibiting the characteristic of corrosivity per 40 CFR§261.22.

D003 - Waste exhibiting the characteristic of reactivity per 40 CFR§261.23.

D004 - Waste exhibiting the characteristic of reactivity per 40 CFR§261.24.

D006 - Waste that is EP toxic due to cadmium.

D007 - Waste that is EP toxic due to chromium.

D008 - Waste that is EP toxic due to lead.

D011 - Waste that is EP toxic due to silver.

F001 - Spent halogenated solvents used in degreasing as described in 40 CFR §261.31.

F002 - Spent halogenated solvents as described in 40 CFR§261.31.

F003 - Spent non-halogenated solvents as described in 40 CFR§261.31.

F005 - Spent non-halogenated solvents as described in 40 CFR§261.31.

F007 - Spent cyanide plating bath solutions as described in 40 CFR§261.31.

B. Condition of Containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the condition of this permit.

C. Compatibility of Waste with Containers. The Permittee shall assure that the ability of the container to contain the waste is not impaired as required by 40 CFR§264.172.

D. Management of Containers. The Permittee shall manage containers as required by 40 CFR§264.173.

E. Containment. The Permittee shall construct, maintain and operate the containment system in accordance with the requirements of 40 CFR§264.175 as specified in the attached plans and specifications for Containment Systems Design, Attachment VI.

F. Special Requirements for Ignitable or Reactive Waste. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the Facility property line.

G. Special Requirements for Incompatible Waste.

1. Prior to placing incompatible wastes or incompatible wastes and materials in the same container, the Permittee shall comply with 40 CFR§264.17(b) as specified in Attachment VI.

2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.

3. The Permittee shall separate containers of incompatible wastes as indicated in the attached plans, Attachment VI, as required by 40 CFR§264.177(c).

4. The Permittee must document compliance with conditions III.G.(1) and (2) as required by 40 CFR§264.17(c), and place this documentation in the operating record (condition II.L.1).

H. Storage of Hazardous Waste Prohibited from Land Disposal

Notwithstanding any other provision contained herein, the storage of any hazardous waste which is prohibited from one or more methods of land disposal under Section 3004 of RCRA, or regulations promulgated thereunder, is strictly prohibited, except such storage as is solely for the purpose of accumulating quantities of such wastes as are necessary to facilitate proper recovery, treatment or disposal.

IV. Special Conditions

1. Within three months of the effective date of this permit, the Permittee shall submit a contingency plan to abandon the on-site drinking water well and connect to the Columbus Water Supply. This plan is to be submitted to the Regional Administrator, U.S. EPA; Division of Solid and Hazardous Waste Management (DSHWM), OEPA and the Central Ohio Section, Ohio EPA Office of Water. In the event that the water supply well becomes contaminated, as evidenced by the quarterly analysis, and harmful to human health and environment, as determined by the Ohio EPA Office of Water, this contingency plan will be implemented immediately.

2. Quarterly samples shall be taken at the well and analyzed for the presence of those hazardous constituents stored on the concrete pad immediately after the effective date of this permit. The result of this analysis shall be submitted to U.S. EPA; DSHWM, OEPA and the Central Ohio Water Supply Section within four weeks of this sampling. Any additional parameters requested by the Central Ohio Section shall be included in these analyses.

3. The on-site water supply well shall be isolated by concrete dikes to prevent water supply contamination in the event a hazardous waste spill occurs on, or near, the storage pad area. The concrete dikes will be constructed according to the specifications of drawing No. 6020-ZD-1 in Attachment VI, within six months of the effective date of this permit.

4. Bay #7 of the storage pad will serve as buffer space between storage area and the supply well. No storage of hazardous waste is permitted in Bay #7.

HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT I
WASTE ANALYSIS PLAN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

SECTION C

WASTE CHARACTERISTICS

The Resource Conservation and Recovery Act, Part 264 (final standards) and Part 265 (interim status standards) require owners/operators of a hazardous waste treatment, storage and disposal facility to have a written waste analysis plan.

Ashland Chemical Company facilities that store laboratory generated waste longer than 90 days are required to prepare a Waste Analysis Plan. The plan must satisfy the following regulatory requirements for a storage facility:

1. Before waste is stored a detailed physical and chemical analysis must be obtained from a representative sample [122.25(a)(2) and 264.13(a)(1)].

2. The analysis may include data developed under Part 261 of RCRA and existing published or documented data on the hazardous waste [264.13(a)(2)].

3. The analysis must be repeated frequently enough to insure the analysis is accurate and up-to-date [264.13(a)(3) and (b)(4)].

4. The written plan must specify parameters identified and rational employed in the selection of the parameters [122.25(a)(3) and 264.13(b)(1)].

5. The test methods which are used to obtain the parameters must also be identified. The selected test methods must be sufficient to insure compliance with Section 264.17 [264.13(b)(2) and (b)(6)].

6. The sampling method employed for collection of a representative sample must be specified for each waste [264.13(b)(3)].

C-1 CHEMICAL AND PHYSICAL ANALYSES [122.25(a)(2) and 264.13(a)(1) and (a)(2)]

The EPA hazardous wastes are identified on the Notification and Part A forms. The lab stores three categories of hazardous waste.

Laboratory Generated

1. Spent organic solvents mixture with/without organic resins and monomers from research labs
2. Waste acids and plating wastes
3. Filtercake contaminated with organic solvents

Laboratory Generated

The composition of the solvent mixture (Item 1) is known based upon knowledge of the solvents used in the particular lab. An intenal chemical waste profile sheet is completed for each drum of waste generated in the labs. The internal chemical waste profile sheet lists the components of each drum. Physical and chemical properties of each component are known. In most cases mixed solvents are classified as D001 because the majority of the individual solvents flash under 140°F.

Waste acids and plating wastes (Item 2) can be similarly classified based upon the activities in the labs which are doing plating research. These would be classified as D002 corrosive wastes or EP Toxic based on known heavy metal contamination.

Filtercake contaminated with organic solvents (Item 3) can also be classified based on the material being filtered. Most of these would be classified D001 from filtering ignitable solvents.

C-2 FREQUENCY OF WASTE ANALYSIS [264.13(a)(3) and (a)(4)]

Laboratory Generated - The solvent mixtures with traces of resins are tested prior to manifesting and shipment using the setaflash test to verify that the mixture does flash under 140°F.

The pH would be run on the waste acids and plating wastes if there is reason to believe that the D002 classification is in error.

No additional testing would be done on the filtercake since knowledge of the material being filtered is adequate.

C-3 Inspections [264.13(a)(4), and (c)(1) and (c)(2)]

Drummed waste is inspected before removal from the lab to insure wastes are placed in the proper DOT specified drum (see Process Information Description Of Containers). These procedures along with the Chemist's knowledge of the process, will prevent the removal of waste not identified on the internal Ashland chemical waste profile sheet.

C-4 Parameters And Rationale [122.25(a)(3) and 264.13(b)(1)]

Table 1 contains selected parameter and rationale for wastes stored at the Ashland facility.

TABLE 1

PARAMETER/RATIONALE

	Hazardous Waste	Parameter	Rationale
Lab Generated			
1.	Solvents Mixture	Flash Point	Majority of solvents used flash at less than 140°F.
2.	Waste Acids and Plating Wastes	pH, EP Toxicity	Source of contamination of the waste is ususally known based upon the process in the lab
3.	Filtercake	Flash Point	Majority of solvents being filtered flash at less than 140°F.

C-5 Test Methods [264.13(b)(2), (b)(5), and (b)(6)]

Table 2 contains parameter and associated test methods.

C-6 Sampling Methods [264.13(b)(3)]

Lab Generated

A BelArt Drum Thief of polyethylene material is employed to collect samples from drummed waste generated by Ashland. The sampler is 41" long with 3/16 inch openings at each end.

JAN 14 1985
Rev. 1
C-5

TABLE 2

Parameter	Test Method	Reference
Flash Point	Setaflash closed cup tester	US EPA SW 846
pH	Electrometric	US EPA SW 846
EP Toxicity - Metals	Atomic Absorption	US EPA SW 846

OCT 2 6 1984
Rev. 0
C-6

Ashland Chemicals
R&D Labs
Chemical Waste Profile Sheet

Identification Mark on Drum: _____

Date Drum Was Filled: _____

Net Weight of Drum Contents: _____

DRUM CONTENTS:

Quantity	Trade Name And Chemical Composition
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

_____
Signature and Date

HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT II
INSPECTION PLAN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

JAN 14 1985
Rev. 1
F-1

SECTION F

PROCEDURES TO PREVENT HAZARDS

F-1 Security

The entire drum storage pad is enclosed by a 6 foot 9½ inch high chain link fence. Access to the pad is through two gates. One gate is at the southwest corner and the other gate is at the northeast corner. The Northeast gate is locked at all times unless the well pump is being serviced.

The main gate is shut and locked on the weekend and evenings when the lab is not in operation.

Two warning signs are in place at the gate and on the fence surrounding the pad. One sign says, "Danger - Unauthorized Personnel Keep Out". The other warning sign says, "Danger - No Smoking, Matches or Open Lights". The locations of these signs are indicated on the drawing of the Hazardous Waste Drum Storage Area in the Appendix.

F-2 Inspection Schedule

The Resource Conservation and Recovery Act and Oil Pollution Prevention Regulations (SPCC Plan) require that a facility is routinely inspected for conditions that may be causing or may pose a threat to human health.

The facility must have a written inspection schedule. The inspection schedule must identify the types of problems to look for during the inspection.

Inspections must be recorded in a log. The log must be kept for three years from the date of inspection. Deteriorations or malfunctions revealed by the inspection must be remedied before they lead to an environmental or human health hazard.

The inspection records must include the following minimum information:

(1) The date of inspection

(2) The time of inspection

(3) The name of the inspector

(4) A notation of the observations made

(5) The date and nature of any repairs or other remedial actions

JUN 19 1985
Rev. 1
F-2

F-2a General Inspection Requirements

Laboratory facilities are inspected routinely to insure safe working conditions. Laboratory chemists and technicians are responsible for daily visual inspection of the areas under their supervision. This includes inspection of tanks, pipes, fittings, pumps and hoses to insure proper working order. Incoming trucks are visually inspected. Each chemist is responsible for checking the emergency equipment in his area daily to make sure it is intact.

Laboratory emergency and safety equipment which are related to hazardous waste storage are inspected monthly. The loading area on the drum storage pad near the southwest gate is inspected daily when loading is being done. These inspections are recorded in inspection logs. The monthly inspection logs for emergency equipment are attached. The inspection logs identify the problems that are to be looked for during inspection.

In addition to monthly inspections of emergency equipment, monthly safety meetings are conducted. Employees are trained in the use of emergency equipment such as fire extinguishers and breathing gear. Employees are trained in fire fighting, dealing with spills and in plant evacuation procedures.

Plant security devices which are related to hazardous waste storage are inspected weekly. This includes the storage pad fence, both gates, and the warning signs. A weekly inspection log is attached for the security devices. The log identifies the problems that are to be looked for during the inspection.

F-2b Inspection of the Waste Container Storage Area

The waste container storage area is inspected weekly. The weekly inspection log for the waste container storage area is attached. The log identifies the problems that are to be looked for during inspection.

The storage area is checked for proper housekeeping. The area is checked for cleanliness in general and for the proper placement and stacking of containers. The stacks are checked for damaged and leaking containers and damaged or broken pallets.

The containers are checked to see that they are in good condition, properly sealed, and properly coded. The drums are checked for loose bungs or open lids. The drum codes are checked to see that incompatible wastes are not being stored in the same area.

The base or floor of the storage area is checked for cracks, wet spots or erosion. The ramp to the storage area and the curbs are checked for cracks or settlement. The containment system is checked for leaks or liquid spills.

JUN 19 1985

Rev. 1

F-2.1

F-2c Remedial Action

As described on the Inspection Logs on pages F-3 to F-6 remedial action or repairs will be done before the problem results in damage to human health or the environment. In the loading area any cracks, erosion, wet spots, or settlement will be repaired before any potential spilled material could reach the soil under the asphalt. Dirty floors and trash in the area will be cleaned up before it results in an accident. Any spill or leak will be cleaned up immediately and the spill residue will be considered a hazardous waste and disposed of properly.

In the container storage area the container placement and stacking will be changed if it does not meet the standard. Open lids or loose bungs will be closed or tightened immediately upon inspection. Contents of containers which show signs of corrosion, leakage or are defective will be placed into empty drums. Damaged pallets will be replaced with good pallets. Any cracks, erosion, wet spots or settlement in the concrete base, ramps or curbs will be repaired before any potential spilled material could reach the soil under the concrete pad. Dirty floor and trash in the area will be cleaned up before an accident. Warning signs which are illegible or damaged will be replaced as soon as new signs can be ordered. A liquid spill or leak will be cleaned up immediately and the spill residue will be disposed of properly.

During the security device inspection, any damage or corrosion to the chain link fence will be corrected if it is in such a location to compromise security. Likewise any corrosion or damage to the gates or locks will be corrected. Any missing warning signs will be replaced.

The following emergency equipment will be inspected and replaced if absent or not present in sufficient quantity; absorbent material, sand supply, chemical neutralizers, fire extinguishers, first aid kit, various items of personal protective equipment listed and empty drums. The fork lift and telephones must be in working order and will be repaired if defective.

DAILY INSPECTION LOG FOR LOADING AREA ON DRUM STORAGE PAD

Date:_____
Time:_____
Inspector:_____

Item	Types of Problems	Status O.K.	Status Not O.K.	Observations	Date & Type of Repairs/Action
Base or Foundation	Cracks, Erosion, Wet Spots				
Housekeeping in Area	Dirty Floors, Trash In Area				

JUN 19 1985
Rev. 1
F-3

WEEKLY CONTAINER STORAGE AREA INSPECTION LOG

Date: _____
Time: _____
Inspector: _____

Item	Types Of Problems	Status O.K.	Status Not O.K.	Observations	Date & Type Of Repairs/Action
Container Placement & Stacking	Aisle Space, Height Of Stacks				
Sealing Of Containers	Open Lids Or Loose Bungs				
Labeling Of Containers	Improper Identification				
Containers	Corrosion, Leakage, Defective Drums				
Pallets	Damaged				
Base Or Foundation	Cracks, Erosion Wet Spots				
Housekeeping In Area	Dirty Floors, Trash In Area				
Ramps And Curbs	Settlement, Wet Spots				
Warning Signs	Readable, Damaged or Missing				
Containment System	Liquid Spill Or Leak				

WEEKLY SECURITY DEVICES INSPECTION LOG SHEET

Inspector's Name:_____
Date Of Inspection:_____

Item	Types Of Problems	Status O.K.	Status Not O.K.	Observations	Date & Type Of Repair/Action
Drum Storage Pad	Corrosion, Damage To Chain Link Fence				
Main Gate - Southwest	Corrosion, Damage To Gate & Lock				
Northeast Gate	Corrosion, Damage To Gate				
Warning Signs	Are Signs Readable Damaged Missing				

Date: _____
Time: _____
Inspector: _____

MONTHLY INSPECTION LOG FOR EMERGENCY EQUIPMENT

Item Inspected	Problems To Look For	Use Status	O.K.	Not O.K.	Observations	Remedial Action
Absorbent Material	Sufficient Quantity Bags/Bales In Good Condition					
Fork Lift	In Proper Operation Condition					
Sand Supply	Sufficient Quantity					
Chemical Neutralizers	Sufficient Quantity; Bags In Good Condition					
Telephone	In Working Condition					
1. Fire Extinguisher (17#)	Is Seal Intact	1				
2. Fire Extinguisher (17#)	Corrosion Of Case	2				
3. Fire Extinguisher (17#)	Damage To Hose	3				
4. Fire Extinguisher (17#)	Gauge Reading	4				
First Aid Kit (1st Floor R&D)	All Items Present					
Personnel Protective Clothing & Equipment (1st Floor R&D)						
1. Hard Hats & Goggles 2. Safety Shoes 3. Work Gloves	Sufficient Quantity					
1. Acid Master Suit 2. Acid Master Suit	Present And In Good Condition					
1. Scott Air Pak	In Work Condition	1				
2. Scott Air Pak	Check Tank Pressure	2				
3. Scott Air Pak	Gauge	3				
4. Scott Air Pak		4				
5. Scott Air Pak		5				
6. Scott Air Pak		6				
7. Scott Air Pak		7				
8. Scott Air Pak		8				
9. Scott Air Pak		9				
10. Scott Air Pak		10				
11. Scott Air Pak		11				
12. Scott Air Pak		12				
13. Scott Air Pak		13				
14. Scott Air Pak		14				
15. Scott Air Pak		15				
Empty Drums	In Good Condition					

HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT III
PERSONNEL TRAINING PLAN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

Ref: Sec. 264.16 and 122.25(a)(12)

PERSONNEL TRAINING

Ashland's Research & Development Laboratory has an extensive safety program which includes training required by the Resource Conservation and Recovery Act (RCRA) and Oil Pollution Prevention Regulations (SPCC Plan). Each employee attends monthly safety meetings. Employees in the Chemical Pilot Plant have safety meetings weekly. In addition to the safety meetings, each employee is provided with the R&D Safety Manual. The safety manual contains company safety regulations and provides basic instructions on how to handle chemical products at the Lab. Periodic training is provided to reinforce safety manual procedures and tests are given to insure that the procedures are understood. In addition to this there is on-th-job training covering the handling of hazardous chemicals. Hazardous wastes would be handled in the samemanner as hazardoius chemicals. A combination of the safety manual, safety meetings and on-the-job training ensures that Ashland personnel meet the standards under RCRA. R&D personnel must not work in unsupervised positions until they have completed this training.

An audio visual training program on RCRA will be used for the annual review of RCRA.

Employees involved in handling hazardous chemical products and wastes are required to take the following additional training:

1. Forklift operators must successfully complete training before being allowed to operate the unit.

2. Plant handlers of hazardous chemical products and wastes receive on-the-job training from the lab supervisor and experienced lab personnel. Part of the on-the-job training includes instructions on properly preparing manifests, placarding drums, etc., for hazardous chemical products and wastes.

3. An audio-visual training program on RCRA is given to lab personnel (See Attachment I). (SLIDE presentation)

4. Procedures for use, inspection (see "Inspection Schedule and Log" in Contingency Plan), repair, and replacement of facility emergency equipment, monitoring equipment and alarm system.

5. Employee requirements due to a fire, explosion or groundwater contamination incidents. These requirements include proper usage of fire extinguishers, employee protection, proper reporting procedures, etc.

6. Shutdown or securing lab operations during a fire, explosion, power blackout, pump failure, operational spillage, etc.

The specific requirements addressed in Training Items 1-6 must be successfully completed before a new employee is allowed to work in an unsupervised area of the plant. The training oulined in Attachment II on page H-40 will be completed within 6 months of an employee being hired into the position. The requirements associated with Training Items 1-6 are repeated at least annually, and certain areas are reinforced to insure continuous understanding at monthly safety meetings. The specifics of training for each job title are contained in Attachment II. Records of all personnel training are maintained at the lab.

Hazardous wastes as defined by RCRA are handled in the same manner as hazardous chemical products. As a result, the combination of safety manuals, safety meetings, tests and on-the-job training sessions ensure that Ashland IC&S personnel meet the standards under RCRA.

Files of all safety and RCRA related training are maintained by the Research Services Coordinator. The key personnel responsible for employee safety training with special emphasis upon RCRA are listed below along with major responsibilities:

Each person listed here is responsbile for reading the R&D Safety Manual with special emphasis on the waste disposal section. Each employee will attend the appropriate monthly/weekly safety meeting. The Research Manager and Research Services Coordinator must keep a copy of the RCRA Contingency Plan and Emergency Procedures and be familiar with the information contained therein. Annually all employees listed here must view an audio visual training program on RCRA or review the waste management aspects of their jobs at a safety meeting.

Attendance records are kept for all safety meetings. This will serve as documentation for training received under RCRA.

Job title for each position at the laboratory related to hazardous waste management and the name of the employee filling each job is as follows:

Research Manager	Michel E. Mullier
Research Services Coordinator	Jerry W. Boone
Shipping Receiving Clerk	James W. Miketa
Chemical Packaging Clerk	Opal Hunter
Pilot Plant	See Attached Sheets

Job descriptions for each of these jobs is attached.

M. E. MULLIER

Research Manager: Responsible for:

1) Analytical Dept.: All analyses, including air monitoring analyses for the Environmental group.

2) Research Services:

   a) Packaging and shipping according to federal rules and regulations

   b) Receiving

   c) Stockroom

   d) Waste disposal

   e) Laboratory modifications and improvements

3) Safety in R&D Building

4) Coordination with Building Services

OCT 26 1984
Rev. C
H-5

MEMORANDUM

To: J. Boone

From: M. E. Mullier

Subject: Research Services Coordinator

Date: March 7, 1977

cc: J. E. Lewis
E. F. Dalton
C. E. Corn

As per our discussion of this morning, I have summarized here what I feel will be your main responsibilities for the foreseeable future:

Safety
- Act as permanent secretary to the Safety Committee
- After reviewing with M. E. Mullier, implement the recommendations of the Safety Committee
- Maintain records for OSHA/Ashland safety requirements and follow-up on these matters

Security
- Maintain Security files
- Coordinate security matters through M. E. Mullier

Services
- Supervise glassware washing activities
- Supervise stockroom operations
- Supervise solvent storage room
- Supervise removal of waste solvent from the laboratories
- Supervise delivery of packages to appropriate laboratory people
- Administer the tax-free alcohol requirements
- Help R&D personnel when research services problems occur
- Coordinate R&D needs with Building Services

I realize that this is a very heavy program but I feel confident that, together, we can handle it.

MEM/re

OCT 2 6 1984
Rev. C
H-6

April 23, 1979

Job Duties of Shipping-Receiving Clerk

1. Maintain an alphanumerical filing system of all current and past purchase orders.

2. Match packing slips with purchase orders, fill out Receipt of Materials form, send copies of purchase order, packing slip and Receipt of Materials form to Accounts Payable, attach copy of Receipt of Materials form to purchase order and file in R & D receiving office.

3. Receive and unload trucks at the R & D Receiving Dock, and request assistance from the delivery clerk with the items if too many, large, or bulky.

4. Maintain work area in a clean, neat, orderly, safe and secure manner.

5. Prepare Bill of Lading for all out-bound surface freight shipments in compliance with D.O.T. regulations and route out-bound surface shipments.

6. Maintain files of all incoming and out-bound Bill of Lading for surface shipments and air bills for air freight.

7. Receive and route any incoming calls for lights, spills, trash pickup, etc., to Building Services personnel.

8. Maintain records on all movements of specialty gases.

9. Check liquid nitrogen tank daily and call for drop shipments if needed.

10. Inspect trucks and attach placards if needed to comply with D.O.T. regulations.

11. Trace any lost shipments through surface freight companies.

12. Be responsive to request from Research Services Coordinator.

13. Assist delivery clerk by identifying and marking all packages which the receipient cannot be identified by the address label or packing slip.

14. Maintain files of sample request forms for all incoming samples for R & D employees.

OCT 2 6 1984
Rec.C
H-7

April 25, 1979

JOB DESCRIPTION OF CHEMICAL PACKAGING CLERK

1. Package and label all chemicals to be shipped in accordance with D.O.T. and IATA regulations.

2. Sign Restricted Article Certifications and prepares shippers letters of instructions and commercial invoice.

3. Maintains and keeps up-to-date all regulations including D.O.T. Title 49, IATA, Ashland freight classifications and the QA Master list pertaining to the handling of hazardous materials.

4. Responsible for ensuring compliance of all chemical shipments with applicable regulations.

5. Verifies all freight bills to find erroneous and/or duplicate payments.

6. Maintains records of all shipments and trace shipments.

7. Maintains liaison with carriers including selection for individual shipments with regard to rates, service, etc.

8. Maintain an adequate inventory of proper packaging materials to meet current regulations.

9. Maintain service contracts with scale and postage machine companies.

10. Obtain packing exceptions from packaging engineering for shipments.

11. Obtain proper shipping name and freight classification from Traffic Department and hazards classification from EOSD when they are not specifically listed in the Ashland Freight Classification book or QA Master list.

12. Obtain necessary approvals of appropriate management for air shipments.

13. Take mandatory air and surface tests, and make perfect scores on both on a yearly basis.

14. Approve sample requests to ship materials out of the Dublin complex.

15. Make out bills of lading for all outbound shipments and confer with the Traffic Department on freight classifications.

CHEMICAL PILOT PLANT STAFF

Gary W. Felton - Group Leader

Lora Polk - Secretary

Sr. Research Engineers

M. Scott Baker
Robert D. Fairchild

Research Engineer

Scott Simmers

Staff Lab Technician

Vincent S. Williams

Lab Technician

Kent C. Gay
W. Keith Hunter
John W. Martin, Jr.
John T. Bennett

7957
JOB DESCRIPTION QUESTIONNAIRE
ASHLAND OIL, INC.

PLEASE TYPE:

OCT 26 1984
R&D-C

H-9

I. IDENTIFICATION INFORMATION

JOB TITLE: GROUP LEADER
NAME: G.P. ANDERSON
REPORTS TO: R. V. NORTON
TITLE: RESEARCH MANAGER
COMPANY/DIVISION: ASHLAND CHEMICAL
DEPARTMENT/SECTION: VENTURE R+D
LOCATION: DUBLIN OHIO
DATE PREPARED: 10/5/84

II. BASIC FUNCTIONS

THIS POSITION IS ACCOUNTABLE FOR (SUMMARIZE)

GENERATION AND INTERPRETATION OF ENGINEERING DATA ASSOCIATED WITH PILOT PLANT ACTIVITIES IN SUPPORT OF ASHLAND CHEMICAL VENTURE.

THIS FUNCTION INCLUDES THE FOLLOWING SPECIFIC ACTIVITIES OR RESPONSIBILITIES AND/OR CHARACTERISTIC PROJECTS: (LIST AND BRIEFLY DESCRIBE AT LEAST THREE OR MORE OF THE MOST SIGNIFICANT USING ADDITIONAL SHEET IF NECESSARY)

- DEVELOPMENT OF EXPERIMENTAL PROGRAMS TO OBTAIN HEAT AND MATERIAL BALANCES FOR NEW PRODUCTS BEFORE SCALE UP TO COMMERCIAL LEVELS

REVIEW AND APPROVAL OF PILOT PROCEDURES USED TO GUIDE DATA COLLECTION

- INTERACTION WITH OTHER GROUPS TO EXPEDITE NEW PRODUCT DEVELOPMENT AS WELL PROVIDING SAMPLES OF EXISTING PRODUCTS TO POTENTIAL CUSTOMERS

III. EDUCATION AND EXPERIENCE REQUIREMENTS

CONSIDER ONLY THE LEVEL REQUIRED TO PERFORM YOUR JOB. (DO NOT INDICATE YOUR OWN UNLESS YOU FEEL IT SHOULD BE THE MINIMUM REQUIRED.)

CHECK ONE:

1 ☐ HIGH SCHOOL
2 ☐ HIGH SCHOOL PLUS
3 ☑ BACHELORS DEGREE
4 ☑ MASTERS DEGREE
5 ☐ PH. D
6 ☐ OTHER

IF TWO THRU SIX ARE CHECKED, PLEASE INDICATE ACADEMIC DISCIPLINE OR FIELD OF STUDY, ETC.

CHEM. ENG. CHEMISTRY - MECHANICAL ENGINEERING

WHAT, IF ANY, ADDITIONAL RELATED EXPERIENCE IS REQUIRED TO FULFILL THE REQUIREMENTS OF THIS JOB? (DO NOT INDICATE YOUR OWN PREVIOUS EXPERIENCE UNLESS YOU FEEL IT SHOULD BE THE MINIMUM REQUIRED.)

PLEASE INDICATE THE LENGTH OF RELATED EXPERIENCE. THIS SHOULD BE EXPRESSED AS YEARS OF BROAD AND VARIED EXPERIENCE RATHER THAN THE SAME EXPERIENCE YEAR AFTER YEAR. (CHECK ONE)

☐ LESS THAN 1 YEAR
☐ 1 - 3 YEARS
☑ 3 - 5 YEARS
☐ 5 - 10 YEARS
☐ 10 YEARS PLUS

OCT 26 1984
Rec'd
H-10

7857
JOB DESCRIPTION QUESTIONNAIRE
ASHLAND OIL, INC.

PLEASE TYPE:

I. IDENTIFICATION INFORMATION

JOB TITLE

NAME

REPORTS TO: G. P. Anderson

TITLE: Group Leader - Chemical Pilot Plant

COMPANY/DIVISION: Ashland Chemical Company

DEPARTMENT/SECTION: Venture Chemical Pilot Plant - R&D

LOCATION: Dublin, Ohio

DATE PREPARED: 10/08/81

II. BASIC FUNCTIONS

THIS POSITION IS ACCOUNTABLE FOR (SUMMARIZE)

Secretary to Group Leader, 4 Research Engineers, 13 Technicians

THIS FUNCTION INCLUDES THE FOLLOWING SPECIFIC ACTIVITIES OR RESPONSIBILITIES AND/OR CHARACTERISTIC PROJECTS: (LIST AND BRIEFLY DESCRIBE AT LEAST THREE OR MORE OF THE MOST SIGNIFICANT USING ADDITIONAL SHEET IF NECESSARY)

General Office - Sorting, opening, and distributing mail, answer phones, correspondence, filing (correspondence, orders, literature, floor plans, etc.), time sheets and attendance charts, supplies, maintaining logs on runs, incoming/outgoing correspondence, procedures, safety data, technical, mechanical and confidential information, company truck, forklift, etc. Typing consisting of monthly/quarterly reports, purchase orders, sample requisitions various forms, procedures, misc. memos, (etc.) Creat necessary forms for analysis of products, operation checklists, etc. Ordering & Logging material & equipment necessary for plant operation, expediting & vendor contact. Work with Receiving/Shipping to coordinate receivables, storage and follow-up paperwork. Coordinating shipping papers for equipment repairs, sample for analysis & samples to customers, etc. Inventory Control Log materials & equipment ordered & received. Maintain system for ordering raw materials to keep necessary stock. Scheduling meetings, conference rooms, food, drinks, etc. Schedule airline reservations, rental cars, motel/hotel reservations.

III. EDUCATION AND EXPERIENCE REQUIREMENTS

CONSIDER ONLY THE LEVEL REQUIRED TO PERFORM YOUR JOB. (DO NOT INDICATE YOUR OWN UNLESS YOU FEEL IT SHOULD BE THE MINIMUM REQUIRED.)

CHECK ONE:

1 [ ] HIGH SCHOOL
2 [XX] HIGH SCHOOL PLUS
3 [ ] BACHELORS DEGREE
4 [ ] MASTERS DEGREE
5 [ ] PH. D
6 [ ] OTHER

IF TWO THRU SIX ARE CHECKED, PLEASE INDICATE ACADEMIC DISCIPLINE OR FIELD OF STUDY, ETC.

WHAT, IF ANY, ADDITIONAL RELATED EXPERIENCE IS REQUIRED TO FULFILL THE REQUIREMENTS OF THIS JOB? (DO NOT INDICATE YOUR OWN PREVIOUS EXPERIENCE UNLESS YOU FEEL IT SHOULD BE THE MINIMUM REQUIRED.)

Purchasing & Expediting functions, First Aid Training, Any Safety Programs.

PLEASE INDICATE THE LENGTH OF RELATED EXPERIENCE. THIS SHOULD BE EXPRESSED AS YEARS OF BROAD AND VARIED EXPERIENCE RATHER THAN THE SAME EXPERIENCE YEAR AFTER YEAR. (CHECK ONE)

[ ] LESS THAN 1 YEAR
[ ] 1 - 3 YEARS
[X] 3 - 5 YEARS
[ ] 5 - 10 YEARS
[ ] 10 YEARS PLUS

OCT 2 6 1984

Personnel Use Only	REQ. NO. H-11

PLOYMENT REQUISITION (REPLACEMENT) DATE SUBMITTED 10/10/1980

ARTMENT · DIVISION · COMPANY	JOB TITLE	NO. REQUIRED
hemical Pilot Plant - Ashland Chemical Co.	Senior Research Engineer	1
LOCATION Dublin, Ohio	**FORCE REPORT CODE**	☐ Regular ☐ Full-Time ☐ Nonexempt ☐ Temporary ☐ Part-Time ☐ Exempt
		DATE REQUIRED Immediately

JOB DESCRIPTION: DESCRIBE THE WORK EMPLOYEE WILL DO. IF PART-TIME, INDICATE SCHEDULE OR HOURS PER WEEK. ATTACH ADDITIONAL SHEET IF NEEDED.

The engineer will be assigned to the Pilot Plant to perform process development work for Venture Research and the divisions. The basic function will be to develop bench scale reactor systems for process development by close coordination and liaison between lab chemists from the various Venture Research groups and engineers. The systems are to be designed and operated by using mathematical modeling, engineering concepts and kinetics from own research/ calculations/experience and assistance from other company and non-company personnel. The primary initial task will be for the design and construction coordination of a Pilot Plant suitable for fixed and fluid bed reaction analysis and use.

QUALIFICATIONS REQUIRED, INCLUDING EDUCATION AND EXPERIENCE

The candidate must be a Chemical Engineer graduate with a Ph.D degree. Previous experience to be in the field of reaction engineering, mathematical modeling, kinetics, and the design d operation of pilot plant units including catalytic units. An extensive knowledge of instrumentation application is highly desirable. A strong "mechanical intuition" is also highly desirable. A Chemical Engineering graduate with a M.S. degree and outstanding career credentials would be considered in lieu of a Ph.D. candidate.

This hiring action will not exceed my Staffing Table authorized level for regular employees.

SIGNATURE	DATE	APPROVED BY	DATE
[signature]	10/10/80		
APPROVED BY [signature] 10/29/80			

INSTRUCTIONS: After the necessary approvals have been obtained, retain the department copy and forward remaining copies to the appropriate Employment Manager, Personnel Department.

INTERNAL/EXTERNAL PLACEMENT

COMMENTS

REQUISITION ASSIGNED TO	DATE
QUISITION FILLED BY	**DATE HIRED**

DISTRIBUTION: WHITE - Employment, CANARY - Internal Placement, Ashland, Ky., PINK - Department

EMPLOYMENT REQUISITION

REQ. NO. OCT 26 1984

(PERSONNEL DEPT. USE ONLY)

DATE SUBMITTED: 1-30-80

DEPARTMENT-DIVISION-COMPANY	JOB TITLE	NO. REQUIRED
Chemical Pilot Plant - Ashland Chemical Co.	Engineer (Entry Level)	1
LOCATION: Dublin, Ohio	☒ REGULAR ☒ FULL TIME ☐ NON-EXEMPT ☐ TEMPORARY ☐ PART TIME ☐ EXEMPT	DATE REQUIRED: ASAP

JOB DESCRIPTION: DESCRIBE THE WORK EMPLOYEE WILL DO. IF PART TIME, INDICATE SCHEDULE OR HOURS PER WEEK. ATTACH ADDITIONAL SHEET IF NEEDED.

The entry level Chemical Engineer will design and operate various pilot plant equipment such as batch reactors, continuous units, distillation columns, extraction units, etc. He or she will work under the supervision of Senior Process Development Engineers and in close contact with pilot plant technicians. The normal work schedule is a standard 40 hour week but some overtime and shift work can be expected.

QUALIFICATIONS REQUIRED, INCLUDING EDUCATION AND EXPERIENCE:

The candidate should have a BS in Chemical Engineering from an accredited college. He or she should have a strong mechanical inclination, should be able to conceptualize, design, and blueprint a total unit layout including process, utility, and safety equipment. As a replacement for a Senior Pilot Plant Technician with six years experience he or she should be a "hands on" person, aggressive, and constantly aware of safety.

THIS HIRING ACTION WILL NOT EXCEED MY MANNING TABLE AUTHORIZED LEVEL FOR REGULAR EMPLOYEES.

SIGNED [signature] DATE 1-30-80

APPROVED	DATE	APPROVED	DATE

INSTRUCTIONS: AFTER THE NECESSARY APPROVALS HAVE BEEN RECEIVED, RETAIN THE DEPARTMENT COPY AND FORWARD REMAINING COPIES TO THE APPROPRIATE EMPLOYMENT MANAGER, PERSONNEL DEPARTMENT.

INTERNAL PLACEMENT: COMMENTS	RELEASED BY	DATE
REQUISITION ASSIGNED TO:		DATE
REQUISITION FILLED BY:		DATE HIRED

COPY 1 – EMPLOYMENT COPY 2 – INTERNAL PLACEMENT COPY 3 – DEPARTMENT

Personnel Use Only	REQ. NO. 1749A	OCT 26 1980

Rev H-13

TYPE
EMPLOYMENT REQUISITION

DATE SUBMITTED 9/23/1980

DEPARTMENT - DIVISION - COMPANY	JOB TITLE	NO. REQUIRED
and Chemical/Process/R&D/Venture	Pilot Plant Lab Technician	7
LOCATION Dublin, Ohio	**FORCE REPORT CODE**	☑ Regular ☐ Temporary ☑ Full-Time ☐ Part-Time ☒ Nonexempt ☐ Exempt — **DATE REQUIRED** ASAP 1980

JOB DESCRIPTION: DESCRIBE THE WORK EMPLOYEE WILL DO. IF PART-TIME, INDICATE SCHEDULE OR HOURS PER WEEK. ATTACH ADDITIONAL SHEET IF NEEDED.

For non-routine pilot plant operations in support of and working directly for a chemical engineer or chemist in the Process Development group. The incumbent will be responsible for monitoring the operation of reactors and carefully reporting data and operating conditions. In addition, the incumbent will perform analytical tasks and prepare tables and graphs of the data accumulated from the reactor. Significant mechanical skills are required for the construction, modification and repair of reactors during normal operation. Some familiarity with complex instrumental techniques would be a distinct advantage as the instrumentation for the analytical procedures is quite complex.

QUALIFICATIONS REQUIRED, INCLUDING EDUCATION AND EXPERIENCE

High school graduate required. A degree in a related science is highly desirable. The applicant is required to have a strong inquisitive attitude and ability for the recording and accurate logging of experimental data in a precise manner. The candidate should have significant college training or experience as a laboratory technician in a medical or other science area. Proper attention to safety matters, and a demonstrated record of thoroughness diligence are required. The noraml work schedule will be the standard 40 hours but rtime and shift work can be expected.

This hiring action will not exceed my Staffing Table authorized level for regular employees.

SIGNATURE	DATE
C P Anderson	9/23/80

APPROVED BY	DATE	APPROVED BY	DATE
Richard V. Hunter	9/23/80		

INSTRUCTIONS: After the necessary approvals have been obtained, retain the department copy and forward remaining copies to the appropriate Employment Manager, Personnel Department.

INTERNAL/EXTERNAL PLACEMENT

COMMENTS

REQUISITION ASSIGNED TO	DATE
REQUISITION FILLED BY	**DATE HIRED**

DISTRIBUTION: WHITE - Employment, CANARY - Internal Placement, Ashland, Ky., PINK - Department

OCT 2 6 1984
Rev. 0
H-14

ATTACHMENT I

RCRA TRAINING (slide presentations)

ATTACHMENT II

JAN 14 [illegible]

Rev. 0

H-41

Research Manager Training Program

I. Training Conducted By

Ashland Chemical R&D Personnel
Ashland Chemical Company Environmental Engineering and/or Safety Services personnel, Columbus, OH
State Regulatory Representatives
Outside Seminars and Programs

II. Annual training at a seminar or meeting conducted by one or more of the above. Individual has responsibility for entire RCRA program at R&D Lab.

III. Corporate Memos

Memos from R&D Division, Environmental Engineering and Safety Services personnel are issued to keep managers up-to-date on current regulatory developments (e.g. OSHA, RCRA, etc.)

Contingency Plan from Environmental Engineering which outlines procedures to follow in hazardous waste emergencies

IV. Research Manager supervises monthly safety meeting.

V. Records of training

Maintained at the lab

JAN 14 1985
Rev. 0
H-42

Research Services Coordinator Training Program

I. Training conducted by

Ashland Chemical R&D personnel

Ashland Chemical Company Environmental Engineering and/or Safety Services personnel, Columbus, OH

State regulatory representatives

Outside seminars and programs

II. Annual training at a seminar or meeting conducted by one or more of the above. Individual is responsible for implementation of the RCRA program.

III. Audio visual RCRA program (viewed at least annually)

Program reviewed and updated by Environmental Engineering, Columbus, OH

Emphasis on RCRA paperwork

IV. Corporate Memos

Review and understand memos from R&D Lab, Environmental Engineering and Safety Services Personnel

V. Monthly Safety Meeting

Supervise and conduct monthly safety meetings

VI. Records of Training

Maintained at the Lab

JAN 14 1985
Rev. 0
H-43

Shipping-Receiving Clerk Training Program

I. Training conducted by

Research Services Coordinator

II. Annual Training

On-the-job by Research Services Coordinator

Review of RCRA A/V program

III. On-The-Job Training

Review of manifest paperwork procedures by Research Services Coordinator. Individual is responsible for assisting with RCRA paperwork

IV. Audio Visual RCRA Program (Viewed at least annually)

Program reviewed and updated by Environmental Engineering, Columbus, OH

Emphasis on RCRA paperwork

V. Corporate Memos

Review and understand memos from R&D Division, Environmental Engineering, Safety Services personnel

Direction from Research Services Coordinator

R&D Safety Mannual

VI. Records

Files of current training maintained in the Lab

JAN 14 1985
Rev. C
H-44

Chemical Packaging Clerk Training Program

I. Training conducted by

Reserach Services Coordinator

II. Annual Training

On-The-Job by Research Services Coordinator

Review of RCRA A/V program

III. On-The-Job Training

Review of RCRA packaging procedures by Research Services Coordinator. Individual may assist in packaging wastes to DOT specifications

IV. Audio Visual RCRA Program (Viewed at least annually)

Program reviewed and updated by Environmental Engineering, Columbus, OH

Emphasis on RCRA paperwork

V. Corporate Memos

Review and understand memos from R&D Division, Environmental Engineering, Safety Services personnel

Direction from Research Services Coordinator

R&D Safety Manual

VI. Records

Files of current training maintained in the Lab

JAN 14 1985

Rev. 0

H-45

Pilot Plant Group Leader Training Program

I. Training Conducted By

Research Services Coordinator

II. Annual Training on completion of Chemical Waste Profile Sheet. Individual is responsible for this aspect of RCRA program

III. Corporate Memos

Review and understand memos from R&D Division, Environmental Engineering and Safety Services personnel

R&D Safety Manual

IV. Monthly Safety Meeting

Conduct or supervise conduct of monthly safety meetings

V. Records of Training

Maintained at the Lab

JAN 14 1985

Rev. 0

H-46

Senior Research Engineer Training Program

I. Training Conducted By

Pilot Plant Group Leader

II. Annual training on completion of Chemical Waste Profile Sheet. Individual is responsible for this area of RCRA program

III. Corporate Memos

Review and understand memos from R&D Division, Environmental Engineering and Safety Services personnel

R&D Safety Memos

IV. Monthly Safety Meeting

Conduct or supervise conduct of monthly safety meeting

V. Records of Training

Maintained at the Lab

JAN 14 1985

Rev-6

H-47

Research Engineer Training Program

I. Training Conducted By

Senior Research Engineer

II. Annual Training on completion of Chemical Waste Profile Sheet. Individual is responsible for this area of RCRA program

III. Corporate Memos

Review and understand memos from R&D Division, Environmental Engineering and Safety Services personnel

R&D Safety Manual

IV. Monthly Safety Meeting

Conduct or supervise conduct of monthly safety meetings

V. Records of Training

Maintained at the Lab

JAN 14 1985

Rev. 0

H-48

Lab Technician

I. Training Conducted By

Research Engineer

II. Annual training on completion of Chemical Waste Profile Sheet. Individual is responsible for this area of RCRA program.

III. Corporate Information

R&D Safety Manual

IV. Monthly Safety Meeting

Conduct or supervise conduct of monthly safety meetings

V. Records of Training

Maintained at the Lab

HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT IV
CONTINGENCY PLAN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

CONTINGENCY PLAN AND EMERGENCY PROCEDURES

SCOPE & APPLICABILITY

The following contingency plan describes the facility's response to a fire, explosion, or release of hazardous waste.

The intent of the contingency plan is to satisfy the requirements of the U.S. EPA Resource Conservation & Recovery Act, the U.S. EPA Comprehensive Environmental Response, Compensation, and Liabilty Act (CERCLA), and the Federal Water Pollution Control Act.

This plan is kept on file at the plant site. The plan has been submitted to local police and fire departments, hospitals and state and local emergency response teams that may be called upon to provide emergency services.

This plan must be amended whenever:

(1) The facility permit is revised.

(2) The plan fails in an emergency.

(3) The facility changes in design, construction, operation, maintenance or in any way that increases the potential for fire, explosions or release of hazardous wastes or changes the response necessary in an emergency.

(4) The list of emergency coordinators changes.

(5) The list of emergency equipment changes.

This contingency plan must always be available for inspection by an EPA inspector.

JAN 14 1985

Rev. 1

G-4

COORDINATION AGREEMENTS

The laboratory Contingency Plan has been distributed to the local and State emergency response teams who are listed below. The local police and fire departments have come to the lab and have reviewed and approved the plant emergency action plan.

A copy of the Contingency Plan has been sent to the following State and local agencies:

Dublin Police Department
P.O. Box 175
Dublin, OH 43017

Mr. Bob Graves
Vice President of Ambulatory Service
Riverside Methodist Hospital
3535 Olentangy River Rd.
Columbus, OH 43214

Ohio Environmental Protection Agency
Emergency Response Section
361 E. Broad St.
Columbus, OH 43215

Mr. Charles Layman
Asst. Director of Laboratory Administration
318 Ohio State University Hospital
410 W. 10th Ave.
Columbus, OH 44310

Bureau Chief, Gene Bostic
Washington Township Fire Department
6255 Shire-Rings Rd.
Dublin, OH 43017

Dr. Mark W. Stock
55 S. High St.
Dublin, OH 43017

Rev. 0

G-4.1

The Washington Township Fire Department is the primary emergency coordinator according to Ohio Law. The Fire Department will coordinate activities through the Dublin Police Department, local hospitals, and other agencies. Upon arriving at the site, the Fire Department will meet with the emergency coordinator from Ashland to review the hazardous waste records describing the waste stored at the lab at the time. Based upon DOT classifications, the Fire Department will determine whether evacuation down-wind of the release is required. The Fire Department will instruct the police on which areas should be evacuated, if necessary. The Fire Department will then determine how to properly fight a fire or spill. The Fire Department will have access to all of the fire fighting equipment located at the facility for their use.

G-5

EMERGENCY COORDINATOR

The primary emergency coordinator of the laboratory is the Vice President, Venture F&D. However, in his absence both the Research Manager Services and Research Manager - Foundry Product & Chemical Systems will act as emergency coordinators.

In the absence of the above listed individuals, the individuals listed below are familiar with the Contingency Plan and the Emergency Procedures and are authorized to act as emergency coordinators.

In addition to local plant personnel, Ashland maintains a 24-hour emergency reporting operator in Ashland, Kentucky (1-606/324-1133). This operator has names and phone numbers of personnel in the Corporate Safety, Environmental, & Occupational Safety Departments who can be contacted in the event of an emergency.

The following is a current list of Emergency Coordinators in the order in which they will assume responsibility. In the event of a fire, explosion, spill or release of material the emergency coordinator and his alternates have the authority to commit the resources necessary to implement this contingency plan.

Title/Names & Address	Home Phone	Office Phone
Vice President, Venture Research & Development James D. Idol 89008 Park Ridge Ct. Worthingtoin, OH 43085	888-2230	889-3188
Research Manager - Services Michel E. Mullier 125 St. Julien Worthington, OH 43085	436-4768	889-3272
Research Manager - Foundry Products & Chemical Systems William R. Dunnavant 4507 Kipling Upper Arlington, OH 43220	451-8374	889-3279
Superintendent of Building Services Elmer H. Hanson 919 Kenmure Ct. Columbus, OH 43220	459-0652	889-3737
Research Services Coordinator Jerry W. Boone 3581 Paris Blvd. Westeville, OH 43081	891-4126	889-3487

Title/Names & Address	Home Phone	Office Phone
Maintenance Supervisor Richard A. Spall 2544 Wickliffe Rd. Upper Arlington, OH 43221	457-0296	889-3106
Ashland 24-Hour Emergency Operator P.O. Box 391 Ashland, KY 41101	1/606-324-1133	

EMERGENCY PROCEDURES

Notification

In the event of an emergency situation plant personnel are instructed to notify the emergency coordinator. The emergency coordinator is responsible for insuring that all facility personnel, local authorities, Ashland Corporate personnel, and State and Federal authorities are notified. The individuals and agencies who must be contacted are identified in Table 1.

Identification Of Hazardous Wastes

The emergency coordinator will immediately determine the source and amount of a hazardous waste release. He will determine the extent to which the plant and surrounding area are affected by a release.

The identity of any material which is released is determined from the location and source of the release and from plant inventory records. The hazardous wastes which are in plant inventory are recorded on the waste manifests. Their hazardous characteristics are obtained from the waste profile sheets. If for some reason the released material cannot be identified a sample will be taken for chemical analysis.

Hazard Assessment

The emergency coordinator is responsible for assessing possible hazards to the human health and the environment. To assist him Ashland maintains a 24-hour emergency telephone operator who provides contact with company personnel in the Safety, Environmental, and Occupational Safety Departments. If the plant has had a release, fire, or explosion which could threaten human health or the environment outside of the facility the emergency coordinator will immediately notify the National Response Center (800/424-8802).

Plant Emergency Action Procedures

The plant emergency action plans for dealing with a fire, explosion, or a spill or release are described below.

1.0 General Response Procedures

These are the general procedures that personnel will follow for all emergencies.

1.1 The person discovering the emergency will alert all others in the area. Persons who are exposed to immediate risk of injury will be moved to safety.

1.2 Immediate action will be taken to end the emergency only if this can be done quickly and safely.

1.3 The emergency coordinator will be notified of the emergency.

1.4 The emergency coordinator will request the following information.

What is the type of incident? Is it a fire, explosion, chemical spill or vapor release?

- What is the exact location and source of the emergency?

- What is the extent of the incident? How large is the area which is affected? How much material has been released or spilled? What is the material which has been released. He will request a sample if necessary.

What is needed in terms of equipment and people to combat the emergency?

1.5 The emergency coordinator will implement the plant contingency plan if necessary. This includes the following.

- Notify all plant personnel of the nature and location of the emergency. This includes confirming that the personnel who are responsible or needed for combatting the emergency have been committed.

- Decide if a general or partial evacuation is required and if so confirm that evacuation orders are given.

- Decide if assistance is required from the local police, fire, and emergency squads. If so, confirm that they have been notified.

- Notify Ashland Corporate Personnel of the nature of the problem.

- Determine if a release, fire, or explosion has occurred which could threaten human health or the environment outside of the plant. If so, immediately contact the National Response Center of the U.S. Coast Guard (800/424-8802) and State Emergency Response Authorities (800/282-9378). He will provide the following information.

  - His name and telephone number
  - Name & address of the facility
  - Time & type of incident (e.g. release, fire)
  - Name & quantity of materials involved, to the extent known
  - The extent of injuries, if any, and
  - The possible hazards to human health, or the environment, outside the facility

2.0 Fire And/Or Explosion

The hazardous waste storage area is easily accessed by fire-fighting equipment and emergency vehicles. The plant emergency action plan specifies the individuals who are charged with fire-fighting. These personnel will provide specific instructions to police, fire or emergency squads who may be responding to an emergency call.

The following actions will be taken in the areas affected by a fire or explosion:

1.0 The individual discovering the fire will sound the alarm and alert persons in the immediate area.

2.0 If it is possible to put out the fire immediately he will do so.

3.0 He will immediately notify the emergency coordinator or the area supervisor who will notify the emergency coordinator.

4.0 The emergency coordinator will request the following information.

- The exact source and location of the fire.
- The size of the area affected by the fire.
- Are there any injuries to personnel?
- What is needed in terms of men and equipment to put out the fire.

5.0 The emergency coordinator will take the following actions.

- Confirm that plant fire fighting personnel are informed of the nature and location of the incident.
- Confirm that personnel are shutting down their operations.
- Give the evacuation order if necessary.
- Confirm that the local authorities who may be needed for assistance have been notified.
- Notify the Ashland Corporate Emergency Operator (606/324-1133) of the incident.
- If the fire or explosion threatens human health or the environment outside of the plant, the emergency coordinator will immediately notify the State Emergency (800/282-9378) Response authorities and the National Response Center (800/424-8802).

All fire extinguishers in the buildings are clearly marked.

Scott Air Paks are to be used by trained individuals. Upon hearing the plant emergency alarm they are to gain access to and ready themselves with the Scott Air Paks. After the Air Paks are on and have been checked these men are to proceed to the emergency area and stand ready.

3.0 Spills Or Material Release

In the event of a chemical spill the individual discovering the spill will immediately report it to the supervisor. The supervisor will contact the Emergency Coordinator.

The Emergency Coordinator will request the source, location and identity of the spill. He will determine the quantity spilled, the rate of spill and the direction in which the spill is heading.

The Emergency Coordinator will inquire if any injuries have occurred and whether a fire or explosion has occurred or may occur.

The Emergency Coordinator will assess the magnitude and potential seriousness of the spill or release. If the spill lies within the company's emergency response capabilities the Emergency Coordinator will contact and deploy the necessary lab personnel. If the accident is beyond plant capabilities the Emergency Coordinator will contact the local police and fire departments, the Ashland Corporate Emergency Operator (606/324-1133), State Emergency Response (800/282-9378) authorities and the National Response Center (800/424-8802).

Those areas of the plant in which a potential spill may occur are identified in the Spill Prevention Control & Countermeasure Plan (SPCC) which is attached. The potential amounts of materials that may be spilled and the spill containment systems are described in Section 9.0 of the SPCC Plan.

In the event that a spill is not contained in a diked or curbed area the plant spill control plan will be implemented. The objective of the spill control plan is to isolate the spill, remove the released material, and clean up and decontaminate the area. This is described in Section 11.0 of the SPCC Plan.

If a chemical spill results in the release of a toxic vapor, the individual discovering the spill will immediately notify personnel in the area and sound the alarm. He will then notify the emergency coordinator of the location, source, and magnitude of the release.

The emergency coordinator will insure that evacuation orders are given for all plant personnel who are not responsible for combatting a toxic vapor release. They will be given instructions to evacuate upwind of the leak. All personnel know all exits in their departments and the alternatives that can be used if an exit is blocked.

Personnel have been pre-assigned to combat a toxic vapor release. When notified these individuals will outfit themselves with Scott Air Paks and report to the scene of the emergency. The emergency coordinator will confirm that these personnel have been informed of the location, source and nature of the toxic vapor release.

The emergency coordinator will determine if surrounding areas may be affected. The National Weather Service can be contacted at 231-5212 for prevailing wind patterns in the area.

If surrounding areas may be affected the emergency coordinator will notify the local fire and police departments, State Response authorities, the National Response Center (800/424-8802) and the Ashland Corporate Emergency Operator (606/324-1133).

As called for by the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA), Ashland will report a spill of one pound or more of any hazardous material for which a reportable quantity has not been established and which is listed under the Solid Waste Disposal Act, Clean Air Act, Clean Water Act or TSCA. The same practice will be followed for any substances which are not specifically listed in these acts but which can be classified as a hazardous waste under RCRA. For those substances for which a reportable quantity has been established a spill will be reported if the amount reaches or exceeds the reportable quantity.

Any hazardous substance spill will be reported if it reaches a storm sewer or navigable waters. If one thousand gallons of oil is spilled in a single event it will be reported.

The above spills will be reported to the State Environmental Emergency Operator (800/282-9378) and the National Response Center (800/424-8802).

4.0 Floods

The hazardous waste storage pad is not located within the 100 year flood plain. Therefore, no provisions are required for floods.

Prevention Of Recurrence Or Spread Of Fires, Explosions, Or Releases

The R&D Safety Manual specifies that all personnel are to secure their operations after the plant emergency alarm is sounded. The emergency coordinator will monitor all equipment for leaks, pressure buildup, gas generation or ruptures.

All storage tanks are in curbed, diked areas. All spills in these areas will be contained until they can be collected and removed. Any spills outside of a containment area will be isolated and cleaned up. The collected material will be disposed at a permitted disposal site.

The contents of all damaged containers will be placed into empty drums.

Storage & Treatment Of Released Material

Immediately after an emergency, the emergency coordinator will make arrangements for treatment, storage, or disposal of recovered waste, contaminated soil, surface water, or any other contaminated material.

Incompatible Wastes

The emergency coordinator will ensure that no wastes are stored in an area that may be incompatible with a released material until cleanup procedures are completed.

TABLE ONE

EMERGENCY CONTACTS

Emergency	Organization/Agency	Emergency No.
Fire/explosion	Fire Department	889-8382
	Police Department	889-1112
	Ashland Emergency Operator	606/324-1133
In case of a major fire/explosion which threatens surrounding areas	State Emergency Response Operator	800/282-9378
	National Response Center	800/424-8802
Hazardous material spill/release	Fire Department	889-8382
	Police Department	889-1112
	Ashland Emergency Operator	606/324-1133
All spills or releases which pose an immediate threat to human health or the environment outside of the plant.	State Environmental Emergency Response Operator	800/282-9378
	National Response Center	800/424-8802
Potential flood	U.S. Army Corps Of Engineers	513/684-3001
	National Weather Service	231-5212
Injuries	Fire Department	889-8382
	Hospital	261-5501

OCT 26 1984
Rec'd
6-14

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

Onshore Research & Development Facility

Address: Ashland Chemical Company

Owner/Operator: Ashland Oil, Inc.
1401 Winchester Avenue
Ashland, Kentucky 41101

Contact Person: Jerry W. Boone

Management Certification: This SPCC Plan will be implemented as herein described:

Signed: _____
Michel E. Mullier, Research Manager

P.E. Certification: I hereby certify that I have examined the facility plan and being familiar with the provisions of 40 CFR Part 112 attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Signed: Eldon E. Ronning

Print Name: ELDON E. RONNING

Registration No.: E-49075 State: Ohio

Date: 10/26/84

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

Table Of Contents

1.0 APPLICABILITY

This SPCC Plan describes this facility's preparedness to prevent the discharge of oil and release of product or hazardous waste to the environment. In the event of a release the SPCC Plan describes the facility's response to control and remove the released material.

The intent of the SPCC Plan is to satisfy the requirements of the Federal Water Pollution Control Act [Section 311 (j) (1) (c)] the U.S. EPA Resource Conservation & Recovery Act (RCRA) and the U.S. EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

This SPCC Plan was prepared to satisfy EPA regulations on Oil Pollution Prevention (40 CFR Part 112) and on Contingency Plan & Emergency Procedures for Hazardous Waste Facilities [40 CFR Parts 264.52 (a) & 265.52 (a)].

2.0 REQUIREMENT FOR PREPARATION/IMPLEMENTATION (Section 112.3)

Owners or operators of onshore and offshore facilities in operation on or before March 26, 1976 that have discharged or, due to their location could reasonably be expected to discharge oil in harmful quantities as defined in 40 CFR Part 110, into or upon navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (SPCC Plan) in accordance with 40 CFR Part 112.7.

No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified by such Professional Engineer. By means of this certification the engineer having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC plan has been prepared in accordance with good engineering practices.

OCT 26 1984
Rec. C.
C-18

3.0 AVAILABILITY OF THE PLAN (Sec. 112.4)

The SPCC Plan must be maintained on file at the plant. The plan must always be available for on-site review by employees of the EPA/state during normal working hours.

This plan along with any amendments will be submitted to the Regional Administrator of the U.S. EPA and to the appropriate State agencies in charge of pollution control upon their request following a reportable release of a hazardous substance from this facility.

This plan along with any amendments must be submitted to the above mentioned agencies whether requested or not within 60 days after either of the following oil spill events:

(1) A discharge of more than 1000 U.S. gallons of oil into navigable waters in a single spill event; or

(2) A discharge of oil in harmful quantities, as defined in 40 CFR 110, into navigable waters in two reportable spill events within any 12 month period. (40 CFR 110 defines a harmful quantity of oil as that which violates applicable water quality standards or causes a film or sheen upon the surface of the water or adjoining shoreline.)

Within 60 days of the occurrence of either of these two conditions, we must submit to the EPA Regional Administrator the following:

(1) Name of the facility;

(2) Names of the facility owner/operator;

(3) Location of the facility;

(4) Date of initial facility operation;

(5) Maximum storage or handling capacity of the facility and current normal daily throughput;

(6) Description of the facility including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause of such spill including a failure analysis of the system in which the spill occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the plan or spill event.

4.0 AMENDMENTS TO THE PLAN (Sec. 112.5)

This plan will be amended for any of the following reasons:

(1) When required by the EPA after review of the SPCC Plan which has been submitted because of either of the oil spill events described in the previous section.

Note: The EPA must submit a written notice of proposed amendments. Within 30 days from receipt of notice, we can submit written information, views and arguments on the proposed amendments. After considering all relevant material presented, the Regional Administrator will notify us of any amendments required or shall rescind the notice. We can appeal the decision of the Regional Administrator. The appeal must be made in writing within 30 days of receipt of notice.

(2) Whenever there is a change in facility design, construction, operations, or maintenance which materially affects the potential for a spill.

(3) The owner or operator is required by law to review each SPCC plan at least once every three years, and an amendment is required if such review indicates more effective control and prevention technology will significantly reduce the likelihood of a spill event (and if such technology has been field proven).

5.0 CIVIL PENALTIES (Sec. 112.6)

Owners or operators of facilities subject to Section 112.3 (a) who violate the requirements of this Part 112 by failing or refusing to comply with any of the provisions of Sec's. 112.3, 112.4 and 112.5 shall be liable for a civil penalty of not more than $5,000 for each day such violation continues.

6.0 FACILITY DESCRIPTION

Refer to the attached plot plan for the plant layout.

This is a Research and Developoment Laboratory. Chemicals and solvents are shipped to the laboratory primarily in drum quantities by truck. These chemicals are stored in drums in the drum storage area of the lab.

Finished products made in the lab are also stored in holding tanks which are listed on the tank list attached to the Spill Plan. The underground waste solvents tank collects wash solvents from the pilot plant cleanup of reactors. This mixture is sold for beneficial reuse.

All waste solvents associated with lab operations are recovered. They are stored in drums or a solvent recovery tank. The waste solvents are either sold for beneficial use or shipped off-site to a solvent reclaimer or a waste disposal firm.

All waste drums are stored on the drum storage pad. Drummed wastes are stored and handled in the same manner as drummed products.

7.0 SPILL HISTORY [Sec. 112.7 (a)]

The facility has experienced no reportable spill events within 12 months prior to the effective date of this part (circ. 1974) and therefore no written description or corrective action is necessary for preventing recurrence.

8.0 SITE DRAINAGE

Refer to the plot plan for reference to plant drainage.

Surface drainage from the catch basins in the parking lot and the roofs of the buildings goes to Cosgray Ditch. This is normally limited to runoff from a heavy rainfall. Cosgray Ditch goes into the Scioto River east of the R&D lab.

9.0 POTENTIAL SPILLS & CONTROL (Sec. 112.7)

The lab areas in which spills can occur are as follows:

1. R&D Lab dock
2. Drum storage pad
3. Tank farm
4. Pilot plant
5. Drum filling

The potential amounts of material that may be spilled in these areas and the means of containing the spill are as follows:

(1) R&D Lab Dock

Spills in the R&D lab dock could be caused from a leaking or punctured drum.

The maximum quantity of a spill would be one drum or 55 gallons for any one incident. A spill of this magnitude would be confined to the immediate area.

The dock floor is concrete and impervious. Absorbents would be used to pick up spills. Chemical neutralizer and absorbents will be used for acid and caustic spills.

(2) Drum Storage Pad

Spills on the drum storage pad could be caused from a leaking or punctured drum.

Once again the maximum quantity of a spill would be one drum or 55 gallons for any one incident. This spill would be confined to the storage pad.

The pad is constructed of 6" concrete and impervious. Absorbents would be used to pick up spills.

The north section of this pad is used to store waste drums. This area will be curbed and ramped to give the following containment for each of the sewer sections.

Bay #	Width	Length	Height	Gallons						
				Pad Vol	Ramp Vol	Pallet Volume	Drum Vol	Net Available Containment	Required Containment	% Extra Containment
1	12'9"	28'	9"	2003	197	194	264	1742	1654	5
2	12'6"	28'	9'	1964	193	194	264	1699	1630	4
3	12'6"	28'	9"	1964	193	194	264	1699	1630	4
4	12'6"	28'	9"	1964	193	194	264	1699	1630	4
5	8'6"	28'	9"	1335	131	97	132	1237	1029	20
6	8'6"	28'	9"	1335	131	97	132	1237	1029	20
7	9'7"	28'	9"	1508	148	97	132	1427	1134	26

Each section was designed to contain 10% of the contents of the drums plus rainfall for a 24-hr 100 year storm.

(3) Tank Farm

Spills in the tank farm could be caused from overfilling a tank or leaking of tank contents. Spills in the tank farm area are confined to the tank farm by the tank farm dike.

The largest tanks in the tank farm have a total volume of 3,000 gallons. If the entire contents of one of these tanks were spilled, the spill would be contained by the tank farm dike.

The tank farm dike has a capacity of 8,500 gallons which is well in excess of the contents of the largest single tank plus freeboard for precipitation.

Any spills in the tank farm will be cleaned up immediately. The recovered material will be shipped off-site either to a reclaimer or to a waste disposal firm.

(4) Pilot Plant

The reactors in the pilot plant are also a service of potential leaks due to vessel or pipe/hose failure.

The maximum amount of material that could be spilled would be 383 gallons, the size of the largest reactor. A spill of this size could be contained by diking and absorbents could be used for cleanup.

(5) Drumming Area

A spill could occur during drumming as a result of overfilling or due to equipment breakdown.

Operators are in constant attendance during drumming. They are available to immediately stop the operation if a spill occurs. The maximum spill which we would anticipate would be the contents of one drum (55 gallons).

There is a metal curb in the drum filling area that will contain the contents of one drum.

Any spills in this area will be cleaned up immediately. The recovered material will be shipped off-site either to a reclaimer or to a waste disposal firm.

10.0 DESIGN & OPERATING INFORMATION

This facility conforms to the following design and operating standards.

(1) Facility Drainage

Drainage from the tank farm dike is controlled by a drain valve in the SE section of the dike wall. The drain valve is a manually operated open and closed type valve. The drain valve is kept in the closed position when not in use.

The dike is drained under responsible supervision. The accumulated material is examined visually before draining to be sure that no oil will be discharged. Analytical tests are made if necessary to ensure compliance with water quality standards. The drain valve is closed following drainage under responsible supervision.

(2) Bulk Storage Tanks

Bulk storage tanks which are used for storage must meet the engineering specifications of the Ashland Chemical Company. The engineering specifications are maintained by the Central Engineering Department which is located at Chemical Company headquarters in Columbus, Ohio. Engineering specifications are maintained for the bulk storage of flammable liquids.

No tank is used for storage of a chemical that does not meet the engineering specifications for that service.

Bulk storage tank installations are provided with dikes of sufficient capacity to contain the contents of the largest single tank plus freeboard for precipitation.

Drainage from the tank farm is controlled in the manner described in the previous section on facility drainage.

The solvent recovery tank is an 8000 gallon underground metal storage tank used to hold wash solvents from the pilot plant reactors.

All tanks are subjected to periodic integrity testing. This service is provided by the Plant Services group of the Central Engineering Department of Ashland Chemical Company.

The tank farm areas are inspected routinely. The tanks are inspected to detect corrosion or leaking of fittings and seams. Visible leaks which result in an accumulation in the diked area are promptly corrected.
The tank farm dikes and the areas around the dikes are also inspected routinely for signs of leakage such as erosion, wet spots or dead vegetation.

Since none of the storage tanks are equipped with internal heating coils, this is not a potential source of leaks.

(3) Facility Transfer Operations

All piping must meet Ashland Chemical Company Engineering Specifications. The Engineering Specifications specify the material of construction and pressure and temperature ratings which are required for transfer piping.

Underground piping is buried in a 6-inch envelope of sand. Buried piping is protected from soil corrosion by a protective wrapping and coating. All materials and application are in accordance with the National Association Of Corrosion Engineers, Std. RP-01-69, Rev. '72.

The amount of cathodic protection needed is determined before installation either by calculation or previous experience or after the pipe is buried from measurements of pipe to soil corrosion potentials using a test rectifier. Ashland uses cathodic protection consultants for design of cathodic protection systems.

Pipeline terminal connections are properly identified and capped.

Pipe supports are designed in accordance with Ashland's Engineering Specifications.

Visual inspections are conducted regularly of aboveground valves and piping. Repairs are made as necessary.

Vehicular traffic would have to leave the roadway to damage any above ground piping.

11.0 SPILL CONTROL PLAN

This facility has a comprehensive contingency plan of which the SPCC plan is only a part. The plant's contingency plan meets EPA regulations for Oil Spill Removal (40 CFR 109) and Contingency Plans for Hazardous Waste Facilities (Subpart D of 40 CFR Parts 264 & 265).

This part of the SPCC Plan describes the facility's response to a spill or release of product or hazardous waste. Refer to the plant's contingency plan for the responsibilities of the plant emergency coordinator and his alternates. The plant's contingency plan which includes the SPCC Plan has been sent to the state and local authorities who may be notified in the event of a spill or release.

In the event of a release or spill, this facility is prepared to commit all on-duty personnel to contain and clean up any spill at this or from this facility. The following "Spill Control Plan" procedure will be implemented.

SPILL CONTROL PLAN

1. If possible, shut all valves immediately to cut off the source of the spill or release.

2. After this has been done or if this is not possible, immediately notify the area supervisor.

3. The area supervisor is to immediately notify the plant emergency coordinator or his on-the-scene alternate of the identity and amount of the spill or release.

4. The area supervisor is to inform the emergency coordinator of the personnel and equipment that he needs to contain a spill and clean it up.

5. All personnel on duty will report to the area supervisor and follow his instructions as to specific duties to be performed.

6. Move oil absorbent material, neutralizing material, and shovels from the R&D Lab area to the area of the spill.

7. Use shovels to move sand and dirt to encircle the spill and prevent it from entering a waterway, ditch, or sewer.

8. Use material to neutralize and/or absorb the spill.

9. Once a spill is contained, neutralized and/or absorbed, immediately remove it and clean the area.

   (A) Place all contaminated materials and recovered liquid in containers that are compatible with the material and that meet DOT requirements for shipping.

   (B) All hazardous waste or material contaminated with hazardous waste must be removed off-site for disposal at an approved disposal site.

10. Should a spill or release occur in other than normal working hours, the individual finding the spill will follow the emergency reporting procedure posted in the plant. If unable to reach the posted procedure in the plant, then telephone as follows:

    (A) Fire Department - 889-8382

    (B) Police Department - 889-1112

    (C) Ashland Oil, Ashland, Kentucky - 1-606/324-1133

    (D) Vice President, Venture R&D - 888-7436

11. Follow the attached reporting procedure for notifying the proper State and Federal authorities of a spill or release.

REPORTING PROCEDURES FOR A SPILL OR RELEASE IN OHIO

National

Notification of a release shall be made as soon as practical once the necessary action is being taken to control the spill.

Duty Officer, National Response Center
U.S. Coast Guard
Washington, D.C.

800/424-8802

Ohio

Notify immediately by calling the 24-hour telephone number.

800/282-9378

Ashland

Report to Ashland Oil by the Emergency Reporting System

606/324-1133

ASHLAND CHEMICAL COMPANY

EVACUATION PLAN

I. In the event of a serious spill and/or fire or explosion, all personnel will immediately evacuate the premises.

A. The alarm will be sounded over the lab.

1. All employees, except rescue squad personnel, must evacuate the building by the nearest exit.

B. All exits are marked and all employees are familiar with the various routes of exit.

C. Upon complete evacuation of the plant, all employees will immediately assemble outside the front of the R&D building in the area shown on the map on the attached Emergency Procedures page.

1. The head of each group arriving at the assembly point will take attendance and report this information to the responding Fire and Police Departments. The authorities have received copies of this plan and are aware of this assembly point location.

2. All employees will stay at the assembly point until told otherwise by the authorities or the Ashland emergency coordinator.

II. Training

A. All employees will become familiar with the plant layout, fire exits and evacuation routes by conducting periodic fire drills and safety meetings.

1. Records of these drills and meetings are maintained at the plant.

B. In order for local authorities to become familiar with the plant layout, meetings and inspections are to be scheduled with local authorities as convenient.

1. Records of these meetings and inspections are to be kept at the plant.

III. General

A. The plant is so constructed that those areas that represent the greatest potential for a hazardous spill or fire are located away from the primary evacuation routes.

ASHLAND CHEMICAL RESEARCH & DEVELOPMENT

OCT 2 6 1984

EMERGENCY PROCEDURES

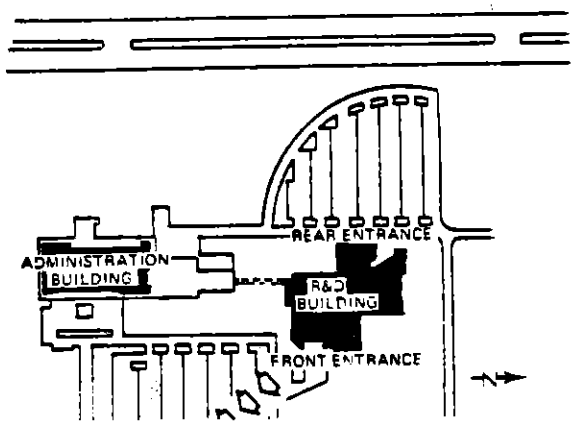
Rev. C
G-4t

For Serious Injuries & Illnesses

1. Call 3113 and explain the nature of the emergency.
2. Contact your supervisor and Mr. J. W. Boone (3487) or Dr. M. E. Mullier (3272).

For Fire, Fumes or Building Evacuation Emergency

1. The person pulling the fire alarm must call 3113 and give the operator the location of the emergency and the nature of the emergency. Tell the operator if there are any injuries.
2. All employees except rescue squad personnel must evacuate the building by the nearest exit and assemble outside the front of the R&D Building in the area shown on the attached map.
3. All Managers, Group Leaders and Supervisors must check with their personnel in the assembly area to be sure everyone is out the building. The front entrance security guard will stand near the assembly area with a bull horn to make any announcements.
4. Dr. Idol, Dr. Mullier (or Dr. Dunnavant in their absence) and Mr. Boone will pick up a walkie-talkie from the front entrance security guard. The rescue squad leader will pick up a walkie-talkie from the back entrance security guard. Security guards at the front and back entrances of the building will have master keys available for use by the Fire Chief.
5. The rescue squad will assemble next to the first floor rear guard station. If this area cannot be reached because of hazards, the rescue squad will assemble at the first floor concourse junction.
6. Building Services will interrupt the fire alarm long enough to announce the location where the fire alarm was pulled and if 3113 was called, the nature and location of the emergency.
7. Dr. Idol, Dr. Mullier (or Dr. Dunnavant) and Mr. Boone will assemble and form a command post in front of the R&D Building.
8. After checking with the command post, the Rescue Squad will investigate the location and nature of the emergency and report by walkie-talkie back to the command post. After this has been completed, the Rescue Squad shall proceed without delay to systematically search and evacuate the building beginning at a point as close as possible to the location of the emergency. Cleared areas will be reported back to the command post.
9. Upon arrival of the Fire Chief, the command post will shift to the Fire Chief's location. The Fire Chief will take over operation of the command post.



HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT V
CLOSURE PLAN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

OCT 2 6 1984

I-2

HAZARDOUS WASTE STORAGE CLOSURE PLAN

The Resource Conservation And Recovery Act, RCRA, Regulations, Part 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities and Part 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Subpart G requires preparation of a Closure and Post Closure Plan.

Ashland Chemical Company, Research Development Laboratory holding hazardous wastes longer than 90 days is classified and permitted as a Storage Facilities and is required to prepare a Closure and Post Closure Plan. The plan must cover the following topics as related to Storage Facilities:

1. Closure Performance Standard - Minimize need for further maintenance; control, minimize or eliminate continuing environmental concern (Paragraph 265.111)

2. Closure Plan - Identify how and when the facility will be closed or partially closed if applicable; satisfy stated closure requirements for containers, tanks. (Paragraph 265.112)

3. Notification - Intent to close; compliance with period of time prescribed for closure and other procedural requirements

4. Post Closure Plan - No requirements as long as all hazardous wastes are removed from the facility.

Ashland Chemical Company is engaged in storage of hazardous wastes in containers. Other than the standards prescribed for "Use and Management of Containers" Subpart I, (Paragraph 261.170-261.189) there are no specific requirements for closure of container storage facilities.

Subpart H Financial Requirements, (Paragraphs 264.142 and 265.142; and 264.143 and 265.143) require preparation of a written estimate of the cost of closure. This cost estimate must be available at the facility and must be updated annually using the government's published inflation factor. Financial Assurance for Facility Closure (Paragraphs 264.143 and 265.143) lists options by which an owner or operator can provide the necessary monies for closure as indicated by the cost estimate.

Liability Requirements (Paragraphs 264.147 and 265.147) mandates that an owner or operator of a hazardous waste storage facility must demonstrate financial responsibility for claims arising from sudden and accidental occurrences that cause injury to persons or people.

Evidence of Financial Assurance for Facility Closure and Liability Requirements must be submitted to the Regional Administrator by certified mail prior to July 6, 1982 and July 15, 1982, respectively.

Description Of Hazardous Waste Storage Facilities And Activities

Container Storage Of Hazardous Wastes - The following wastes are stored in 55-gallon, DOT approved drums. The drums are inspected when placed in the storage area and on a weekly basis thereafter for evidence of leakage and/or container damage/deterioration:

D001	Ignitable wastes
D002	Corrosive wastes
D003	Reactive Wastes
D004	Contains arsenic
D006	Contains cadmium
D007	Contains chromium
D008	Contains lead
D011	Contains silver
F001	Spent halogenated solvents used in degreasing
F002	Spent halogenated solvents
F003	Spent non-halogenated solvents
F005	Spent non-halogenated solvents
F007	Spent cyanide plating bath solutions

A maximum of 400 55-gallon containers of hazardous waste could be in storage at any given time. Hazardous wastes will be stored an average of 180 days.

Closure Plan

Closure Performance Standard

The objective of this closure plan is to eliminate the need for post-closure care and prevent the escape of hazardous waste, hazardous waste constituents, leachate and contaminated rainfall to the ground and surface waters and the surrounding land.

All containerized hazardous wastes will be removed during closure. Any material in the container storage area containment system will be removed. If there is evidence of any spills or leaks outside of the containment systems, samples will be taken and analyzed to determine the extent of contamination in the soil and if necessary groundwater. Any contaminated soil will be removed and disposed of at a permitted disposal site.

This closure plan covers the closure of the waste container storage area. The maximum inventory of hazardous wastes which are expected at any one time are 400 drums of containerized wastes. This plan includes partial closure in the event that the waste container storage area is moved to another area of the plant.

Closure Of Container Storage Area

All drums in the waste container storage area will be removed for transport to a permitted T/S/D facility. Five trips may be required to remove all waste drums.

Any liquids in the storage area containment system will be drummed, analyzed and depending on the analysis removed for disposal at a permitted T/S/D facility.

The drum storage area will be cleaned with a steam cleaner unit and an industrial grade detergent and water. We propose to wash the pad once with an industrial grade detergent and pick up all liquid, then flush the floor with clear water and vacuum it up. All liquid collected by the vacuum will be drummed off (we expect two 55-gallon drums to be generated) and the cleaner unit will be rinsed clean, also into the same drums. After all the scrubbing and rinsing is complete, we will test to show that the pad is clean in the following manner. A blank will first be run by saturating a clean sponge with distilled water. Water from the sponge will be analyzed for TOC and TOX. The sponge will then be resaturated and the previously cleaned pad will be manually scrubbed in several areas. The water on the pad will be picked up by the sponge, squeezed into a bottle, and then analyzed for TOC and TOX. If a major increase in analysis is noted between the blank and pad scrubbings, the pad will again be power scrubbed until tests show only minor differences. All of this work will be inspected by a P.E. and he will certify that the work has been done. All cleanup residues from the cleaning will be tested for pH and if they are below 2.0 or above 12.5 the aqueous solutions will be disposed of as a hazardous waste. If found hazardous, the liquid will be removed for disposal at an approved site.

Soils in the facility are not expected to be contaminated by container waste storage. However, if evidence of possible soil contamination exists, such as a break or hole in the pavement near the storage area or unloading area at least one soil sample will be taken in each area.

Closure Notification And Schedule Of Closure

A closure plan must be submitted to the EPA Regional Administrator and Director of Ohio EPA at least 180 days before the date the plant is expected to begin closure. The Regional Administrator will then modify, approve or disapprove the plan within 90 days of receipt. Ashland and the affected public will have the opportunity to submit written comments on the closure plan prior to the Regional Administrator's decision on the plan.

Within 90 days after generating the final amount of hazardous waste, Ashland must treat or remove all hazardous waste from the site as described in the approved Closure Plan. Within six months after or generating the final hazardous waste, Ashland must complete the closure activities outlined in the Closure Plan. A longer closure period may be approved by the Regional Administrator or Ohio EPA Director.

Certification of closure must be submitted to the US/EPA Regional Administrator and the Director of the Ohio EPA when closure is completed. This certification must be completed both by Ashland and by an independent registered professional engineer that the facility (or hazardous waste activity at the plant) has been closed in accordance with the specifications in the approved Closure Plan.

Table One shows a schedule for closure even though we cannot predict the actual date of closure. All financial calculations are based on a closure date in the year 2002.

Final closure activities will be initiated within 90 days after generation of the final volume of hazardous wastes. The completion of closure will be within 180 days of this occurrence. The Ohio EPA will be notified 180 days before beginning final closure. Final closure will be supervised and certified by a professional engineer in addition to Ashland.

Post-Closure Plans

Post closure plans will not be needed for this facility because it is not a disposal facility.

Notice In Deed And Notice To Local Land Authority

Because this is only a hazardous waste storage facility and not a disposal facility notation is not necessary in the deed informing potential purchasers of restrictions associated with a disposal site.

Closure Cost Estimate

The closure cost estimates are presented in Table Two. Closure cost activities include removal of waste inventory, decontamination and cleanup of the waste container storage area, disposal of wash residue and closure certification. A 15% contingency has been added for the analysis, removal and disposal of any contaminated soil. A 15% contingency has also been added for administration overhead.

An estimated $58,806 (October 1984 cost estimate) will be needed to close the hazardous waste storage facility.

The assumptions made in the cost estimate are as follows:

1.0 Removal Of Waste Inventory

The waste volume is 400 drums of assorted wastes. Disposal costs are based on land disposal of the drums.

2.0 Hauling

Five trips will be required to remove the waste inventory.

3.0 Decontamination Of Storage Area

Any material in the storage area containment system will be removed. The container storage area will be decontaminated with a hot detergent wash. It is estimated that 32 manhours of labor will be required to clean up the storage area. Approximately six drums of wash residues will be accumulated. A disposal cost of $107 per drum is assumed for the wash residues which includes transportation.

4.0 Closure Certification

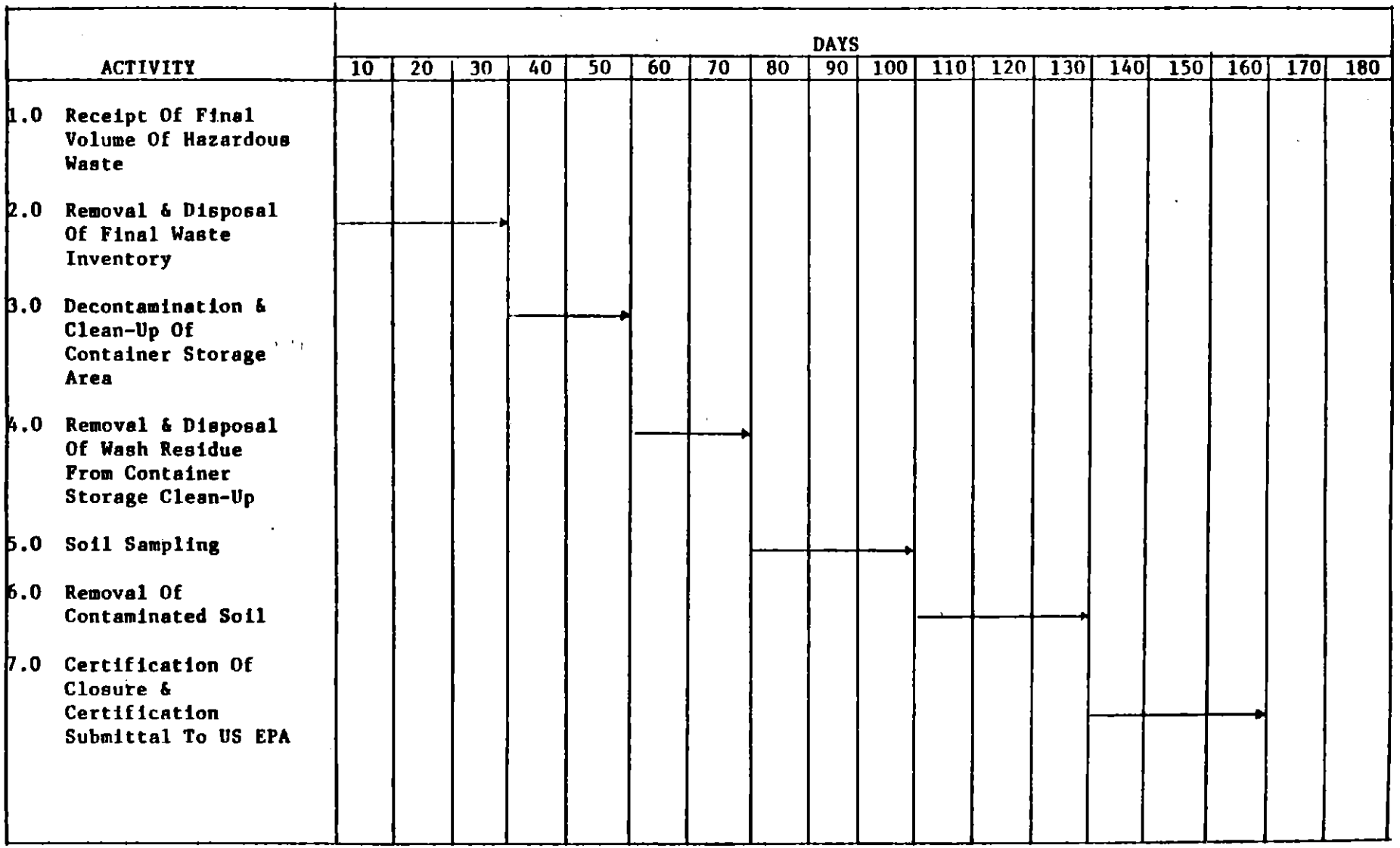
The cost of certification of closure by a professional engineer is estimated on the basis of a labor rate of $60/hour and expenses for a 2-day period.

5.0 Contingencies

No soil contamination is anticipated as a result of waste container storage and handling. Nevertheless, a 15% contingency has been added for the analysis, removal and disposal of contaminated soil. An additional 15% contingency has been added for administration overhead.

This closure cost estimate will be kept on file at this facility. It will be adjusted annually for inflation by using the Department Of Commerce's Annual Implicit Price Deflator for Gross National Product. It will be revised whenever a change in the closure plan affects the cost of closure.

TABLE ONE



ANTICIPATED CLOSURE SCHEDULE

TABLE TWO

ASHLAND CHEMICAL COMPANY

INDUSTRIAL CHEMICALS AND SOLVENTS DIVISION

COST ESTIMATE FOR FACILITY CLOSURE

OCTOBER, 1984

1.0	Removal Of Final Waste Inventory (400 Drums Of Various Chemicals @ $102/Drum)	$40,800
2.0	Hauling (5 Trips @ $420/Trip)	2,100
3.0	Decontamination Of Storage Area	
	Labor (32 Hours @ $12/Hour)	384
	Rental Of Steam Cleaner (2 Day @ $75/Day)	150
	Disposal Of Contamination Residues (2 Drums @ $107/Drum)	642
4.0	Closure Certification	
	Labor (P.E. 16 Hour @ $60/Hour)	960
	Expenses (2 Days @ $75/Day)	150
	Transportation (200 Mile @ $0.25/Mile)	50
5.0	Subtotal	$45,236
6.0	Contingencies	
	15% Administration Overhead	6,785
	15% Analysis, Removal, & Disposal Of Contaminated Soil	6,785
7.0	Total Closure Cost	$58,806

HAZARDOUS WASTE MANAGEMENT PERMIT

ATTACHMENT VI
CONTAINMENT SYSTEMS DESIGN

ASHLAND CHEMICAL COMPANY
RESEARCH AND DEVELOPMENT LABORATORY
OHD 042-511-209

SECTION D

PROCESS INFORMATION

This section discusses process information for the storage of drummed wastes. Ashland will store drummed wastes until a truckload quantity is accumulated for shipment to a permitted disposal site.

D-1 Containers

D-1a Containers With Free Liquids

The wastes which are to be stored at this facility are listed in the Part A application. The chemical and physical characteristics of these wastes are described in the waste analysis plan (Section C). These hazardous wastes will contain free liquids. Therefore, the storage area is designed for drums containing free liquids.

The hazardous waste storage area is located outdoors north of the R& D lab. Hazardous wastes have been stored in this area in accordance with interim status standards for waste containers (40 CFR Part 265 Subpart I, Use And Management Of Containers). This storage area will be upgraded to meet the final standards for waste containers as specified in 40 CFR Part 264 Subpart I.

This will require the construction of a ramp and curbing around the waste drum storage area. A layout of the drum storage area showing construction details and spacing of drums is shown on the drawing in the Appendix. A compliance schedule for construction of the storage ramp and curbing is shown in Table D-1.

The container storage pad covers an area of 8,753 ft^2. Of this area approximately 3,147 ft^2 will be used for storage of hazardous waste. There will be 888 ft^3 for the ramp areas providing forklift access to the storage area. There will be 1,559 ft^2 of aisle space and the remaining 700 ft^3 will be actual storage area.

The storage area is divided into seven sections which are separated by curbs to permit the storage of incompatible wastes. At the present time the majority of the wastes we store are compatible. However, since we are a research facility the nature of these wastes could change at any time. This design will give us maximum flexibility in waste storage.

Stacked two drums high the four storage areas on the west side have the capacity to hold as many as 40 drums or a total of 80 drums each. The three storage areas on the east side have the capacity to hold as many as 20 drums or a total of 40 drums each. The maximum number of hazardous waste drums which are expected to be in storage at any one time are 400 drums. Due to the parameters used to design this storage area and the fact that we currently have only a few drums of incompatible wastes, the maximum designed drum storage is 440. This will allow us to store nearly 400 drums in the first 6 bays and store the few remaining drums of incompatible waste in the 7th bay.

The basis for determining which wastes are to be stored in a particular bay are the known chemical and physical properties of the wastes. This information is obtained from the Ashland Chemical R&D Lab's internal chemical waste profile sheet which each generator in the lab must complete. Since these internal forms are completed by chemists or chemical technicians, no further analyses are necessary to characterize each waste. At the present time the principle source of incompatibility is between corrosives (D002) and the chemicals with which they may react.

D-1a(1) Description Of Containers

The containers which are used for a particular waste must meet DOT regulations for that waste. The container which meets the DOT regulations for the waste is compatible with the waste stored in it. During weekly inspections of the storage area any leaking drum caused by incompatibility of the waste and drum would be noticed. The contents of the drum would be transferred to another more compatible drum if the leaking were caused by waste/drum incompatibility. The containers which Ashland uses for the different hazardous wastes are described in the Standard Practice Instructions K-17 which are attached.

Ashland personnel who are responsible for filling, shipping and receiving hazardous waste containers are trained to check the specification markings on the containers to see that they comply with DOT regulations.

D-1a(2) Container Management Practices

Waste containers are always kept closed when in storage. This facility serves only as a storage facility for wastes generated in Ashland research and development operations.

The waste container storage area is inspected weekly to ensure that the containers are stored in a manner to prevent ruptures and leaks. The containers are stored on wooden pallets. The storage area is checked to determine that the pallets and containers are properly placed on the pallets.

The pallets are adequately spaced for inspection. The maximum number of drums expected to be in storage at any one time are 400 drums.

The container storage area is outside and away from sources of ignition. The storage area is 380 feet from the property line. Drums of incompatible wastes are stored in separate bays. No self-reactive or explosive wastes are permitted on site.

Drums and pallets are moved and handled with special forklift trucks.

D-1a(3) Secondary Containment System Design & Operation

The containment system design is shown in the drawing in the Appendix. The storage pad is constructed of 6 inch thick concrete. A 9 inch high curb will surround three sides of the storage area. The entrance ramp will be sloped up from base grade to curb height and then back down to the storage pad floor.

The storage pad area for waste storage will be divided into seven storage bays by six internal curbs of 9 inch height. The large storage bays will hold 10 pallets as shown. The small storage bays will hold 5 pallets. A total of 80 55-gallon drums can be stored in the larger bays and 40 55-gallon drums can be stored in the smaller bays when pallets are stacked 2 high.

The capacity of the secondary containment system is calculated as follows:

JAN 1 4 1985

Rev. 1

D-4

Cell #1

1. The far western bay of the storage area has the dimensions of 12'9" x 28' and a curb height of 9 inches. Contained volume is therefore:

   $12.75 \text{ ft} \times 28 \text{ ft} \times \frac{9}{12} \text{ ft} = 267.8 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 2003$ gallons

2. Volume of ramp:

   $\frac{9}{12} \text{ ft} \times 12.75 \text{ ft} \times 5.5 \text{ ft} \times (\frac{1}{2}) \ (7.48 \text{ gal/ft}^3) = 197$ gallons

3. Volume of pallets used:

   $V = 10$ pallets (2.6 ft^3)/pallet $(7.48 \text{ gal/ft}^3) = 194$ gallons

4. Volume of drums stored:

   $V = (1)^2 \text{ft}^2 \ (.750 - .469) \text{ft} \times 40 \times 7.48 \text{ gal/ft}^3 = 264$ gallons

5. Net available spill containment volume:

   $= 2003 + 197 - 194 - 264 = 1742$ gallons

6. Required volume = 10% of amount stored + 24 hour 100 year rainfall = .10 (80 drums x 55 gals/drum) + (4.56 in x ft/12 in) (12.75 ft) (33.5 ft) x 7.48 gals/ft^3 = 440 + 1214 = 1654 gallons

Cells 2, 3, & 4

1. The 2, 3, and 4 bays from the west of the storage area have the dimensions of 12' 6" x 28' and a curb height of 9 inches. Contained volume is therefore:

   $12.5 \text{ ft} \times 28 \text{ ft} \times \frac{9}{12} \text{ ft} = 262.5 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 1964$ gallons

2. Volume of ramp $\frac{9}{12}$ ft x 12.5 ft x 5.5 ft x $(\frac{1}{2})(7.48 \text{ gal/ft}^3) = 193$ gallons

3. Volume of pallets used: Same as Cell #1 194 gallons

4. Volume of drums stored: Same as Cell #1 264 gallons

5. Net available spill containment volume:

   $= 1964 + 193 - 194 - 264 = 1699$ gallons

6. Required volume = .10(80 drums x 55 gals/drum) + (4.56in x $\frac{\text{ft}}{12\text{in}}$)(12.5ft)(33.5ft) x 7.48 gals/ft^3 = 440 + 1190 = 1630 gallons

JAN 14 1985

Rev. 1

D-5

Cells 5 & 6

1. The 5 and 6 bay from the west of the storage area have the dimensions of 8' 6" x 28' and a curb height of 9 inches. Contained volume is therefore:

   $8.5 \text{ ft} \times 38 \text{ ft} \times \frac{9}{12} \text{ ft} = 178.5 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 1335 \text{ gallons}$

2. Volume of ramp:

   $\frac{9}{12} \text{ ft} \times 8.5 \text{ ft } 5.5 \text{ ft} \times (\tfrac{1}{2})(7.48 \text{ gal/ft}^3) = 131 \text{ gallons}$

3. Volume of pallets used:

   $V = 5 \text{ pallets } (2.6 \text{ ft}^3/\text{pallet})(7.48 \text{ gal/ft}^3) = 97 \text{ gallons}$

4. Volume of drums stroed:

   $V = (1)^2 \text{ ft}^2(.750 - .469)\text{ft} \times 20 \times 7.48 \text{ gal/ft}^3 = 132 \text{ gallons}$

5. Net available spill containment volume:

   $1335 + 131 - 97 - 132 = 1237 \text{ gallons}$

6. Required volume = .10 (40 drums x 55 gals/dr) + $(4.56 \text{ in.} \times \frac{\text{ft}}{12\text{in}})(8.5 \text{ ft})(33.5 \text{ ft}) \times 7.48 \text{ gal/ft}^3 = 220 + 809 = 1029 \text{ gallons}$

Cell 7

1. The cast bay has the dimensions of 9'7" x 28' and a curb height of 9 inches. Contained volume is therefore:

   $9.6 \text{ ft} \times 28 \text{ ft} \times \frac{9}{12} \text{ ft} = 201.6 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3 = 1508 \text{ gallons}$

2. Volume of ramp:

   $\frac{9}{12} \text{ ft} \times 9.6 \text{ ft} \times 5.5 \text{ ft} \times (\tfrac{1}{2})(7.48 \text{ gal/ft}^3) = 148 \text{ gallons}$

3. Volume of pallets used: Same as Cells 5 & 6 97 gallons

4. Volume of drums stored: Same as Cells 5 & 6 132 gallons

5. Net available spill containment volume:

   $1508 + 148 - 97 - 132 = 1427 \text{ gallons}$

6. Required volume = .10 (40 drums x 55 gallons/dr) + $(4.56 \text{ in.} \times \frac{\text{ft}}{12\text{in}})(9.6 \text{ ft})(33.5 \text{ ft}) \times 7.48 \text{ gals/ft}^3 = 220 + 914 = 1134 \text{ gallons}$

D-1a(3)(a) Requirement For The Base To Contain Liquids

The storage pad base is 6 inch thick concrete. This base will be sufficiently impervious to contain leaks and spills. Any leak or spill will be cleaned up immediately.

D-1a(3)(b) Containment System Drainage

The waste drums are stored on pallets to protect the bottoms from contact with spilled liquids. The pallets elevate the drums by 5.6 inches.

D-1a(3)(c) Containment System Capacity

Wastes are stored in 55-gallon drums. The maximum number of drums that will be stored in a storage bay are 80 drums (4400 gallons). Each larger storage bay has secondary containment for 1742 gallons for bay 1 and 1699 gallons for bays 2, 3 and 4. Each smaller bay has secondary containment for 1237 gallons for bays 5 and 6 and 1427 gallons for bay 7.

D-1a(3)(d) Control Of Run-On

Run-on is prevented from entering the containment area by 9 inch curb around the storage area.

D-1a(4) Removal Of Spilled Liquids

The R&D Lab has a spill control plan for removing spilled liquids. Any liquid spill or leak will be cleaned up immediately. Small spills will be neutralized and/or absorbed with material kept in inventory for such purposes. Large spills will be picked up with a portable pump.

All spills will be transferred to drums that are compatible with the spilled material and that meet DOT requirements for hazardous wastes. The spilled material will be sampled and submitted for approval for disposal at a permitted disposal site.

The lack of a roof may result in some accumulation of rainwater during heavy storms. The secondary containment system has adequate capacity to hold this water in addition to 10% of the stored waste.

The storage area will be checked following a heavy rainfall to see if any rain-on has occurred. Any rainwater accumulation will be drummed off. A sample of the rainwater will be analyzed to determine if it has been contaminated. The sample will be analyzed for any organic carbon using a gas chromatograph and a pH will be run. If the organic carbon content is significant, a TOC will be run to further characterize the carbon.

If pH is in the range of 6.5-8.5 and TOC, if run, are at background level the rainwater will be discharged to the city sewer. If the rainwater is contaminated a sample will be submitted for approval for disposal at a permitted disposal site.

Table D-1
COMPLIANCE SCHEDULE FOR WASTE CONTAINER STORAGE AREA

DUBLIN

Activity	Days after effective date of Permit							
	20	40	60	80	100	120	140	160
1. Request For Contract Bids	→							
2. Award Bid & Prepare Contract		→						
3. Order Materials, Prepare Forms			→					
4. Placement Of Concrete & Curing				→	→			
5. Certification Of Construction & Submittal To Ohio EPA						→		